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REPORT OF The SECRETARY of AGRICULTURE

1959

REPORT OF:
The SECRETARY of AGRICULTURE
1959

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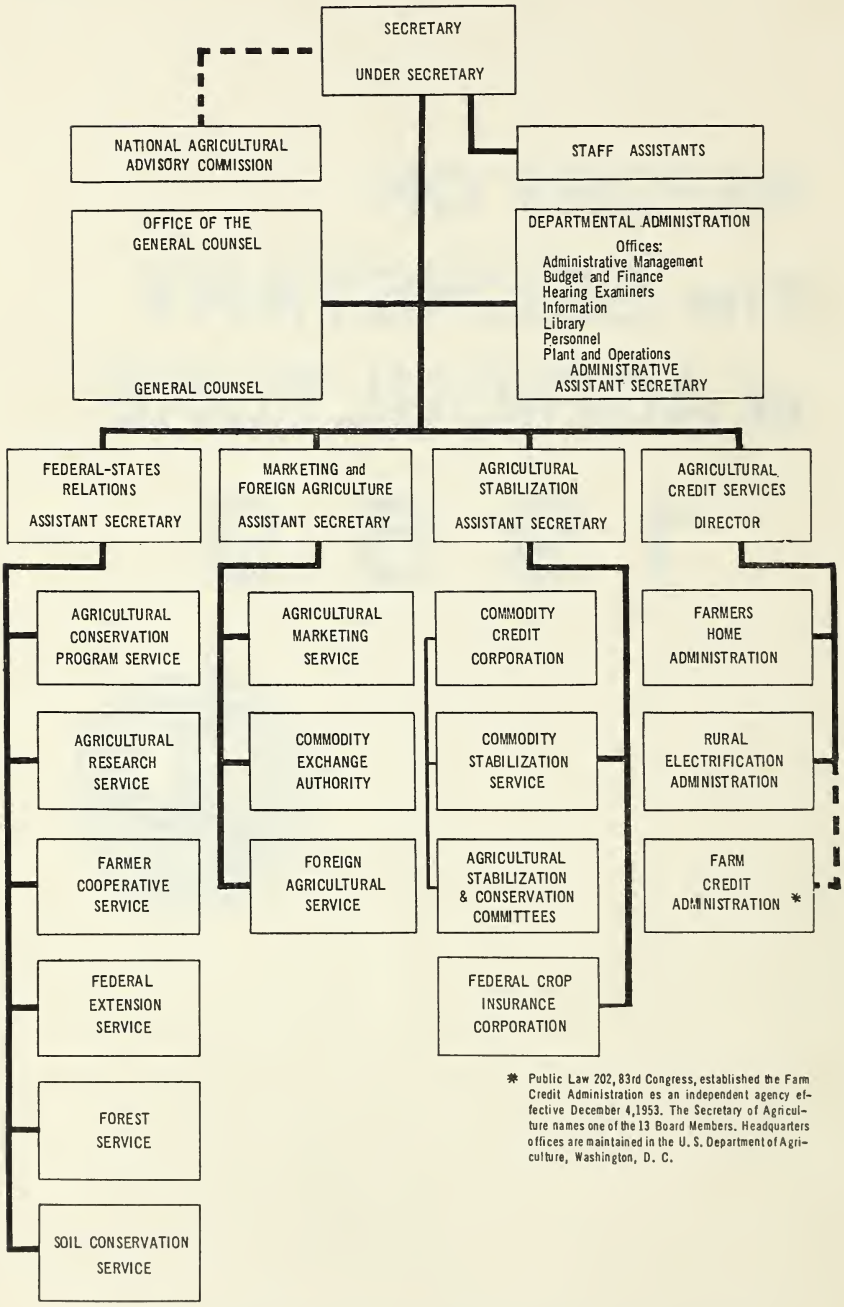
UNITED STATES DEPARTMENT OF AGRICULTURE



* Public Law 202, 83rd Congress, established the Farm Credit Administration as an independent agency effective December 4, 1953. The Secretary of Agriculture names one of the 13 Board Members. Headquarters offices are maintained in the U. S. Department of Agriculture, Washington, D. C.

Department of Agriculture,
Washington 25, D.C.

THE PRESIDENT,
The White House, Washington, D.C.

DEAR MR. PRESIDENT: The following pages give an account of how the Department of Agriculture served not only our farm people, but all the people of the United States, during the past year.

In the Department of Agriculture, we are primarily concerned with the welfare of U.S. farmers and the stability of the Nation's agriculture. We are responsible, however, for programs that in no small part determine the kind of food our people eat, the quality of clothing they wear, and the kinds and amounts of certain essential raw materials that will be available to manufacturers.

Our employees take a just pride in the role the USDA has played in the remarkable progress of our Nation's agriculture. Each agricultural worker in the United States now produces, on the average, food and fiber for 23 persons. When you took office, Mr. President, the average farm worker produced food and fiber to support 17 persons. The significant advance that has been made in the American standard of living during the present decade, as well as the tremendous upsurge in living standards which we have witnessed during the present century, are markedly due to the increase in agricultural productivity.

Many changes are taking place in U.S. agriculture. Total agricultural assets are at their peak. Proportionately more farmers own their farms than ever before, and the big majority are entirely free of mortgage debt. The family farm is growing larger and stronger, and this is vitally important. But what is of even more fundamental importance is the fact that our family farms are moving toward greater freedom. Your administration has urged a new and solid approach to farm problems. The very heart of that approach is summed up in the word freedom.

For these reasons, I know you are particularly interested in the report that follows. It is with pleasure that I submit herewith the annual report of the Department of Agriculture for 1959.

Respectfully yours,

EZRA TAFT BENSON,
Secretary of Agriculture.

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REPORT OF

The Secretary of Agriculture

1959

PROGRESS IN AGRICULTURE

Despite continuing problems, aggravated by the cost-price squeeze, the agriculture of the United States was fundamentally in a sound position at the end of 1959. Surpluses continued to be a heavy burden on the farm economy.

On the other hand:

Total agricultural assets were at an alltime high of $208.2 billion. Total debt owed by farmers was $24 billion, or less than 12 percent of agricultural assets. The net equity position of U.S. farmers was $184.2 billion—an increase of $141 billion since 1940.

Net income per farm in 1959 was about one-eighth higher than a decade earlier, in 1949.

Per capita income of persons living on farms was estimated at $960, one of the highest levels in history.

Farm ownership was record high, with two out of three farms free of mortgage debt.

Farm foreclosures were extremely rare—near the alltime record low.

At the end of 1959, most of the 21 price-supported crops were selling for prices above the support level.

The family farm continued to be the dominant factor in U.S. agriculture, with 96 percent of our commercial farms and ranches family operated.

The Rural Development Program is beginning to reach the class of farm families not heretofore helped by support and other programs.

Agriculture today is a bigger and better customer for the products of the American economy than it has ever been. Farm people spend over $40 billion a year on producers' and consumers' goods and services, over three times as much as they spent two decades ago.

In real dollars the farm population, though it consists of one-third fewer people, spends 40 percent more than it did two decades ago. On a per farm basis, expenditures in real dollars have nearly doubled.

Though less than 12 percent of our population lives on farms and ranches, about 40 percent of the Nation's total labor forces is either serving agriculture or processing and distributing farm commodities as well as engaging in actual farming. This constitutes the Nation's greatest industry.

The standard of living on U.S. farms is the highest in history. Nearly all farms now have electricity—compared with only 11 percent in 1935. About 70 percent of farm families own television sets. Homefreezers and other appliances are common on farms. Two decades ago only 25 percent of our farms had telephone service. Today over 60 percent have telephones and the percentage is rapidly increasing. Over half of all farm families subscribe to some prepayment medical plan.

Farm families make more and more trips into town for shopping, recreation, and eating out. Most of the food consumed by farm families today is purchased rather than home grown. Up to 40 percent of the net income of farm people comes from off-the-farm sources. The farmer and the businessman, the farm housewife and the city housewife, have become indistinguishable in dress and manner.

Nor are these the only signs of progress.

> The surplus production of U.S. farms is being made available to the needy at home through various programs and to hungry people abroad through "Food for Peace."
>
> Exports of farm products by value were down 7 percent in fiscal 1959, but the volume exported was the third highest in history.
>
> Market development activities at home and abroad are laying the groundwork for bigger markets in the future.
>
> Agriculture research and education are moving forward at accelerating rates.
>
> Forestry developments and soil and water conservation are moving ahead at new alltime highs.
>
> The beneficial effects of the new corn, cotton, and rice programs, and the continuing benefits of freedom for producers of livestock and livestock products, will be more clearly evident in the years ahead.

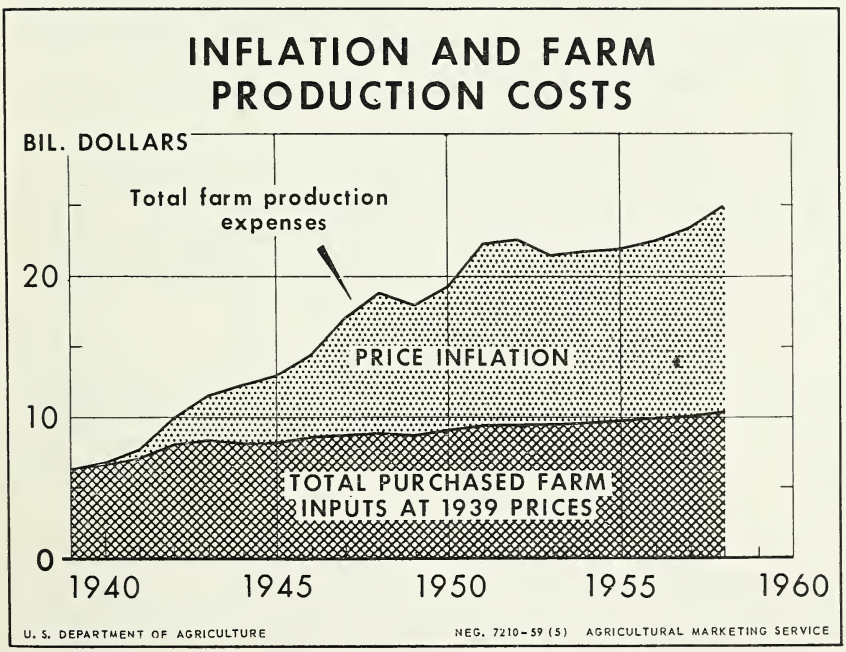
Looking ahead, we estimate that cash receipts from dairying in 1960 will be the highest on record—$4.7 billion. Poultry and egg income will be up in 1960 by some $200 million to $3 billion. Hog prices in the fall of 1960 are expected to be higher. Exports of all farm products are expected to rise to at least $4.5 billion in fiscal 1960—a gain of 22 percent. Farmers are making adjustments to change—as they have done traditionally.

This is not to say, however, that agriculture's major difficulties have been solved. Far from it. We have tremendous surpluses of some crops. A few crops are still under programs which are outmoded,

too costly, discriminatory and harmful to agriculture as a whole. The cost-price squeeze is still pinching our farm people. There are many underemployed, low-income farm families.

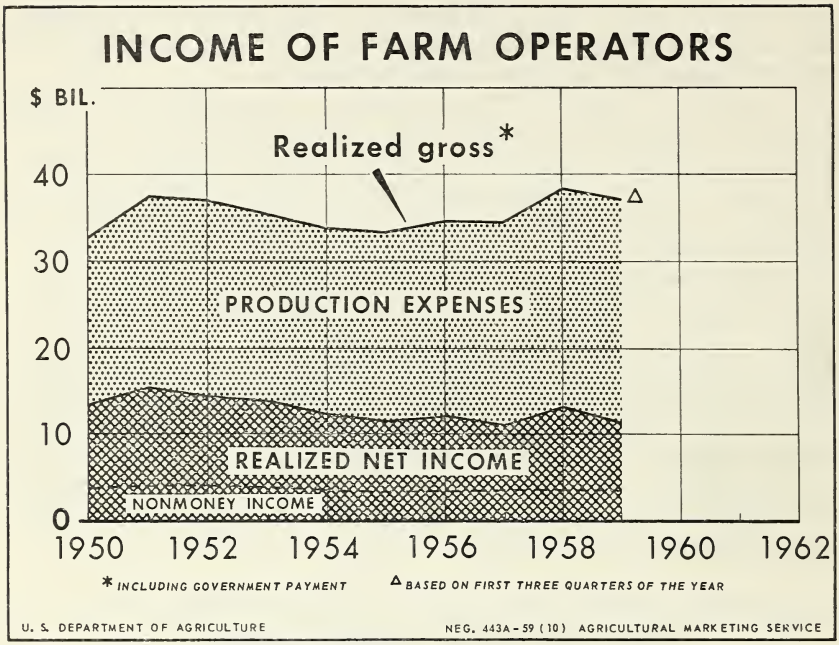
The threat of continued price inflation became an outstanding public issue during fiscal 1959. Of course, the cost-price squeeze in agriculture, caused in part by "creeping inflation" in the nonfarm sector, had attracted attention considerably earlier. The Department undertook a study to determine the precise effects of inflation on the farm economy.

Recently, most prices, particularly those originating in the nonfarm sector, have been rising at an average rate of between 2 and 3 percent a year. This is "creeping inflation." It adds a billion dollars a year to farmers' costs of production and living. Farmers spend over $40 billion annually; about $25 billion for farm production and about $16 billion for family living. Creeping inflation has meant continuously rising costs for farm business as well as higher costs of living for farm families. We have publicized these facts widely in the belief that only when the seriousness of the problem is recognized can there be real progress toward a solution.



Farm Prices and Income

The existing surpluses, plus the record 1958 output, forced average prices received by farmers in 1959 down about 4 percent below 1958. Most of the drop was in hogs, eggs, and broilers. A larger



volume of marketings, however, somewhat offset these lower average prices.

Farmers received about $32.8 billion for the crops, livestock, and livestock products they sold during 1959. This was somewhat less than their cash receipts from marketings in 1958 ($33.6 billion).

Gross farm income was about $37 billion, compared with $38.3 in 1958. This reflected lower Government payments as well as smaller cash receipts from marketings. Acreage Reserve payments, almost $700 million in 1958, were discontinued in 1959.

Production expenses rose 3 percent above 1958 to a new high of $26.0 billion. This, combined with the decline in gross income, brought about a drop of $2.1 billion, or 16 percent in farm operators' realized net income. Income of farm people from nonagricultural sources was higher than in 1958, but not enough to offset fully the drop in income from farm sources.

Plentiful Food

The productivity of our farm people, meanwhile, continued to help Americans to be the best fed and best clothed people in the world. Our people used about 2 percent more food in 1959 than in 1958, and this was a new record. Consumption of food per person was nearly 2 percent greater than in 1958, and only slightly below the alltime high. In recent years food consumption per person has continued to average about 11 to 14 percent above the prewar level of 1935–39.

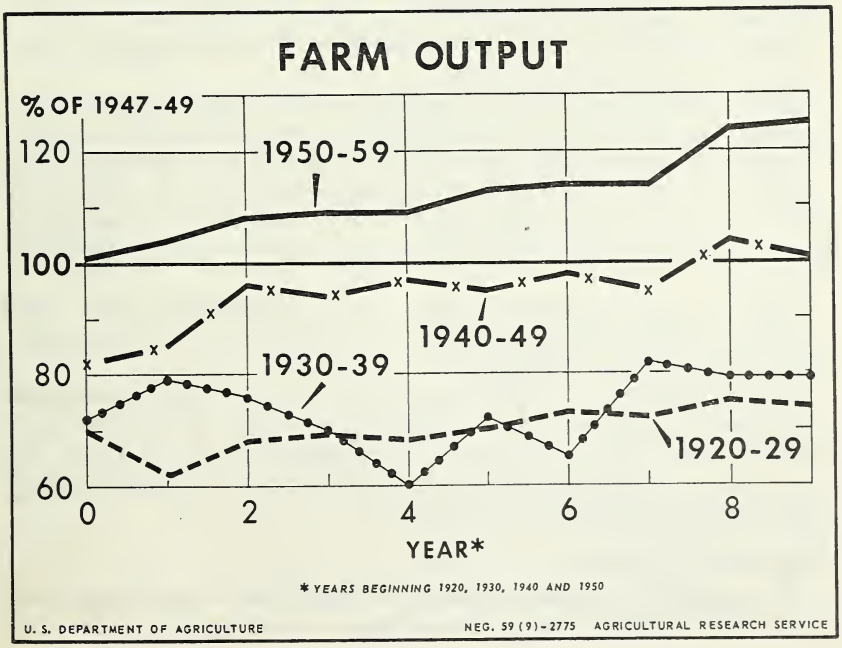
Retail food prices were a little lower in 1959 than in 1958, even though marketing costs were higher. The farmer's share of the consumer food dollar dropped from 40 to 38 cents.

Meats were more plentiful in the fall of 1959 than in 1958, because of heavier supplies of pork and of the better grades of beef. Much more lard and slightly more eggs were available than a year earlier, and about as much chicken and turkey. Butter and cheese were slightly less plentiful because of reduced Government stocks, but there was a little more of the other major dairy products. Supplies were heavier for fresh and processed fruits (particularly citrus), sweetpotatoes, dry edible beans and peas, and edible fats and oils. Fresh vegetables were in much smaller supply and noticeably higher priced than in the fall of 1958. There were not as many potatoes available as a year earlier, though supplies were well above average.

Supplies of most foods will probably be large in 1960, even larger than in 1959. More meat is indicated. Milk production should at least equal that of 1959. With normal weather, food crops will be big.

Record Production

Dominating the 1959 record production picture was the huge corn crop of nearly 4.4 billion bushels, exceeding by 15 percent the previous record crop of 3.8 billion bushels in 1958. Sugar beet production was also at an alltime high, while outputs of soybeans and grain sorghums were the second largest on record.



The 1959 wheat crop was down nearly a fourth, but a 45-percent increase in carryover resulted in a record wheat supply about 3 percent above the previous high in 1958–59. Cotton production was nearly 30 percent above the small crop of 1958.

Supplies of wheat for 1959–60 totaled 2,415 million bushels, up 3 percent from the record of a year earlier. Domestic disappearance for 1959–60 is estimated at 630 million bushels, about the same as in the previous year, and exports are estimated at 425 million bushels, below a year earlier but above the 1948–57 average of 375 million bushels. The carryover on July 1, 1960, therefore, is expected to total about 1,360 million bushels, an increase of about 83 million bushels from July 1959.

Supplies of feed grains for the 1959–60 feeding year increased about 7 percent over 1958–59, reaching a new high of 263 million tons. Although domestic use and exports of feed grains are expected to continue heavy in 1959–60, a sizable increase in carryover of feed grains seems probable at the close of the 1959–60 marketing year.

Cattle inventories rose further in 1959 as producers continued to withhold animals from slaughter for herd expansion. Sizable gains were expected in all classes.

Hog production also rose in 1959, with a 12-percent gain in spring pigs and a 2-percent increase in fall pigs. The Department cautioned hog producers that further expansion in the spring of 1960 could put further downward pressure on hog prices. There were indications that the warning had been heeded. In December 1959, producers reported intentions for 12 percent fewer sows to farrow in the spring of 1960 than a year earlier, thus promising improved prices for hogs in much of 1960.

Milk production declined slightly in 1958 after five successive record-establishing increases, and a slight further reduction occurred in 1959. Consumer demand for ice cream and fluid milk increased somewhat in 1959, and demand was well maintained for other dairy products, except butter and fluid cream. Supply and demand in dairy products in 1960 will be virtually in balance for the first time in 8 years.

Egg and poultry production continued at a high level in 1959. The Department helped strengthen the market by purchasing dried eggs for the School Lunch Program.

Turkey production in 1959 set another record. The Department announced a program in late August to buy birds for use in the National School Lunch Program. Broiler production early in the year was also record high, but broiler chick placements beginning in early May were cut back from the year before.

Abundance Continues

The continuity of the technological revolution in agriculture was never more evident than in the alltime record output achieved in

1958 and 1959. After the great surge in productivity of 1958, when crop output rose 11 percent and total production 10 percent, it was highly probable that a dip in output would follow in 1959.

On the contrary, crop production in 1959 despite much less favorable weather, was at least equal to the 1958 record, while livestock production was up about 2½ percent.

Farmers and ranchers are doing a magnificent job of producing an abundance of food and fiber. This is strikingly illustrated by the fact that our farm people, less than 1 percent of the world's people, produce one-fifth of the world's output of red meat, and nearly one-third of the world's milk.

The extent of the revolution in agricultural productivity in the past two decades is illustrated by the following comparisons.

In 1939, when World War II broke out in Europe, American farmers produced a 2½-billion-bushel crop of corn on 88 million acres. In 1959 they produced 70 percent more corn on 4 percent fewer acres.

In 1939, farmers produced 740 million bushels of wheat on 52½ million acres. In 1959 they produced about 50 percent more wheat on about the same acreage. In 1958, on comparable acreage, the wheat crop hit 1,462 million bushels—nearly double 1939.

Production of oilseed crops has more than tripled since 1939.

Both land and animals have been made much more productive. There are 64 million beef cattle and calves on the same pastures and rangelands that in 1939 supported only 30 million head.

In 1959 there were about 4 million fewer dairy cows on U.S. farms than in 1939. But each cow produced on the average nine-tenths of a ton more milk, and total dairy production was about 15 billion pounds higher.

For every two eggs a hen laid in 1939, today's hen is laying three.

Manpower requirements have been sharply cut. An hour of labor in 1959 produced nearly three times what it did 20 years ago. In World War I we produced our farm commodities with 13½ million workers; in World War II, with less than 10½ million workers. Today there are only 7 million to 7½ million farmworkers. And total output is one-third higher than in World War II and nearly double that of World War I.

The increasing productivity of our farmers has given our people far better diets, and helped give them far better health. It has done much to make possible our rising standard of living. It has provided manpower for industry and the professions. It has made, and kept, food a good buy. Our people today purchase much more food for an hour's take-home pay than they could a generation ago.

But this vastly increased productivity has brought the Nation problems as well as benefits. In seeking to solve the problems, the Nation has in a few cases taken refuge in unrealistic policies which, far from solving difficulties, have merely aggravated them.

The technological revolution in agriculture cannot be legislated out of existence. Further gains in the science of farming are inevitable.

If we are to master the use of our new-found and steadily growing productivity, and not let it master us, we must emphasize ways to—

Use more completely our farming abundance.

Expand existing markets, recapture lost markets, and tap new markets.

Develop new uses for farm products.

Increase the efficiency of production and marketing so as to reduce unit costs.

Provide price and income programs that will help move farm products into markets, not into Government storage.

Fighting for Markets

Here are some examples of the kind of actions needed. Twenty years ago more than 80 percent of the fiber used in our clothes, our homes, our tires, and other ways came from our cotton fields. Now cotton's share of the fiber market has dropped to 65 percent. Synthetics, which accounted for less than 10 percent of the fiber used in 1940, make up close to 30 percent of sales today.

But cotton is fighting back. We have learned more about cotton since our Agricultural Research Laboratory was established in New Orleans in 1941 than was discovered during the preceding several thousand years.

The use of cotton in wearing apparel has increased appreciably in recent years. Much of the gain is due to wash-and-wear cottons, in which Government and industry utilization research played a significant part. Production of resin-treated wash-and-wear cotton has jumped to about 2 billion square yards a year—equal to 1,400,000 bales—and it is still increasing. Further improvements in wash-and-wear cottons may well double or triple the present consumption of resin-treated goods.

Similarly 20 years ago, the soap industry took more than 2 billion pounds of inedible fats and oils each year. The development of detergents from crude oil has changed the market. Today less than 1 billion pounds of agricultural fats and oils go into soap.

Real progress has been made in finding new markets to replace this heavy loss. The largest new outlet that has been developed is in livestock feeds, which now absorb about 500 million pounds of inedible fats each year.

We are meeting success also in building markets for continuing industrial use of animal fats as fatty acids, lubricants, and plasticizers.

More needs to be done along these lines, and it needs to be done for many more farm products.

What the U.S. Department of Agriculture did in 1959 and the preceding years, and what we feel must be done in the future to deal with the problems of our agriculture, is the subject of the pages that follow.

THE ROLE OF RESEARCH

Scientific research is responsible for much of our present-day agricultural progress. A man-hour of farm labor in 1959 produced four times as much as it did in 1910–14.

We must not let surpluses of a few commodities blind us to the need for a strong, well-balanced, continuous program of agricultural research to maintain a continuous flow of products from U.S. farms, ranches, and forests not only to meet the expanding requirements of our increasing population, but also to find new and expanded uses for the output of the Nation's farms. Such a research program will help in the development of wise use and management of our lands and in the economical preservation of water to meet ever-enlarging needs. It will give farmers new techniques for producing commodities of uniform quality in high volume—for producing them in ways that are profitable to farmers and at costs that permit competition with other industrial raw materials. But, above all, we need marketing and utilization research, including research on the industrial use of agricultural products, for broadening the markets for crops which can now be produced in such abundance.

Agricultural Research Service

Here are some of the highlights of ARS achievements announced in fiscal 1959.

Eastern seaboard growers and processors welcomed a new lima bean named "Thaxter" and predicted it will soon replace older varieties because of its resistance to costly downy mildew and its high yields.

A new cotton opener-cleaner not only makes possible the use of lower grades of cotton in quality products, but also provides an appreciable reduction in manufacturing costs. Currently, more than 40 of these opener-cleaners are in use or on order by the textile industries.

Farmers and consumers alike benefited from a quarantine system that in fiscal 1959 inspected more baggage and cargo and intercepted more potentially dangerous foreign plant pests and diseases than ever before in history.

For the first time since the screw-worm became established in the Southeast, stockmen there suffered no widespread losses from the pest as a result of spectacular progress by

the cooperative screw-worm eradication campaign during the year.

Dr. Hazel K. Stiebeling, Director of ARS Institute of Home Economics, received the Government's highest award for Distinguished Federal Civilian Service, the President's Gold Medal. She is the first woman to be awarded the medal, and the second ARS recipient.

Stronger Basic Research

Basic research that probes the unknown, developing new knowledge, holds out great promise for American agriculture. During the past year the Department continued to strengthen its basic research effort, particularly through the development of Pioneering Laboratories. Five new laboratories have been established, bringing the total to 15.

Research in the new laboratories deals with plant enzymes, animal genetics, plant virology, the chemistry of micro-organisms, and the economics of interfirm integration in farming.

In addition, fundamental studies in specific fields of agriculture have been increased in support of applied research. This kind of supporting basic research for weed control, for instance, demonstrated how one important herbicide kills by inducing a vitamin deficiency in certain weed plants.

Opportunities to conduct basic research in these fields were further strengthened during the year by an extension of authority permitting the Agricultural Research Service to make grants for fundamental work to State experiment stations and to private research organizations.

Another program begun during fiscal 1959 makes available for basic research the knowledge and talents of able foreign scientists. With money from foreign sales of surplus farm products under Public Law 480, ARS contracts for studies aimed at finding new and and improved uses and markets for surplus U.S. farm products.

A total of 14 grants amounting to $1½ million were made under the program during the year. Scientific institutions in Central and South America, the Middle East, and Far East, in addition to Europe, were surveyed as possible future recipients of grants.

Utilization Research

The Department is emphasizing research that will convert more farm products into raw materials for industry. By expanding markets, such research also helps agriculture meet problems arising out of surplus production of some farm commodities.

The major effort in utilization research falls mainly to the four Utilization Research and Development Divisions of ARS, with regional laboratories at Philadelphia, Pa., Peoria, Ill., New Orleans, La., and Albany, Calif. These laboratories maintain close liaison

with industry, both to keep industry informed of research progress and to learn of industrial needs and accomplishments.

Important developments in fiscal 1959 include a *new cornstarch now undergoing extensive evaluation for industrial applications.* The starch contains 55 to 60 percent amylose, compared with 27 percent in ordinary cornstarch. The higher amylose content makes the starch attractive for such industrial uses as paper additives, textile sizes, adhesives, and packaging films. Unique possibilities offered by the starch include food wrappings that are digestible, and tough films that can be used to package medicines, dyes, insecticides, and other chemicals.

Utilization scientists further widened market potentials for cereal crops by developing an improved *two-stage electrolytic process for making dialehyde starch from corn, wheat, and grain sorghums.* This starch is useful in tanning leather and in making wet-strength paper.

Dairymen, poultrymen, and other livestock feeders are already feeding *dehydrated forages that have been treated to prevent loss of forage nutritive value during storage,* using a new technique.

Early and continuing research has contributed to the rapid advance of the *wash-wear cotton* industry. In 1958, industry consumed some 800,000 bales of cotton that would not have been used without the development of wash-and-wear cottons.

The first major *improvement in the cotton carding machine* since its invention 200 years ago resulted from recent ARS research. Commercial mill tests show a saving of much of the spinnable cotton fibers normally removed as waste by conventional carding machines.

Researchers made significant progress in the development of an acceptable *dried whole milk.* A pilot plant was installed to study the various factors related to producing a foam-dried whole milk. Products have been made that are comparable in flavor to fresh whole milk and have excellent solubility.

As a result of the Department's research, *epoxidized fats and oils have found a growing outlet as stabilizing plasticizers for use in vinyl plastics.* These products are now being manufactured at a rate requiring about 40 million pounds of fats per year.

Research has provided basic information on the effect of temperature, air velocity, and relative humidity on freezing and thawing rates, and on the stability of frozen bakery products during and subsequent to processing.

Efficiency, Quality, Are Aims of Farm Research

In addition to creating new market possibilities, other goals of agricultural research are to help farmers and ranchers increase efficiency, lower their costs of production, and raise the quality of their products.

Discovering a new industrial use for a farm commodity is of little value unless farmers can provide users with a steady supply

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of the most useful form of the commodity at a price they are willing to pay.

Many new crop varieties were released during fiscal 1959 through the efforts of USDA plant breeders, often working in cooperation with State experiment station and industry scientists. The new plants are bred to improve quality, overcome losses from diseases, and insects, permit more efficient harvest, and reduce weather hazards.

Although not available yet to growers, new semidwarf wheats have been bred that thrive under high fertilization rates without lodging. These short-strawed, high-yielding varieties represent a major accomplishment in the field of plant breeding.

The sugar beet nematode, an extremely destructive and widespread pest that has defied conventional control measures, may at last have met its match in a nematode-tolerant line of sugar beets discovered by crop researchers in 1959.

Many new time- and labor-saving machines for agriculture are products of ARS and cooperative research to help farmers and ranchers cut costs, step up efficiency, and improve product quality.

Our food supply in the United States is the safest, cleanest, and most wholesome in the world. The Department of Agriculture takes pride in the part it has played in making this true.

The Department considers that the safety of the Nation's food is its first responsibility in carrying out assignments from the Congress. This principle guides USDA research programs and regulatory and service activities pertaining to foods and to the use of chemicals in food production and distribution.

The Department intends to continue and intensify its efforts to insure that American consumers get the foods they need and want, in adequate quantities at a reasonable price, and that these foods continue to meet the highest standards of nutritional quality and wholesomeness. It strongly endorses the safe use of carefully tested chemicals as required to maintain the excellence, variety, and economy of the foods we eat.

The Department continued its battle against insects and other pests and diseases. In probing for new weapons against citrus red mite, a destructive fruit pest, researchers discovered a virus disease that is deadly to the mite.

In other searches for biological controls of insect pests, scientists developed sprays containing spores of a bacterium known as *Bacillus thuringiensis* that controlled tobacco hornworm as effectively as the best chemical measures now available and left no harmful residues on tobacco leaves.

Two new systemic insecticides, proved effective by Department scientists, are already helping livestock growers control cattle grubs.

Plant physiologists found that three plant-growth-regulating compounds can pass slowly from roots of treated plants into surrounding soil and be reabsorbed by nearby plants. The discovery has raised

hopes of finding substances that will work in the same way to control plant pests and diseases.

Poultry disease scientists developed a safe and potent killed-virus vaccine for Newcastle disease in chickens, strengthening hopes for eventual eradication of the disease.

Poultry scientists also brought forth the first effective fowl cholera vaccine.

Consumer Wants and Needs

Consumer wants and needs to a large extent influence what farmers grow. Our home economics research is geared to determining these wants and needs for clothng, household equipment, housing, and food.

We are concerned with trends in the Nation's eating habits. Research indicates that our people today are consuming fewer calories per person than people did 50 years ago; that more protein is being furnished by animal products; and supplies of calcium and riboflavin have increased in line with greater use of milk products. Because of enrichment of cereal products, supplies of B vitamins and iron are higher today than in earlier years. However, the amount of vitamin A and ascorbic acid consumed has declined steadily since 1946 because fewer fruits and vegetables are being eaten.

Research Consolidation

In order to deal more effectively with the problems posed by an increasingly complex agriculture, some consolidation and strengthening of research facilities was accomplished during fiscal 1959.

Research on some products was shifted from one laboratory to another.

A new National Seed Laboratory at Fort Collins, Colo., was completed. A Fruit and Vegetable Products Laboratory was opened at Winter Haven, Fla., and operations were started at a new Horticultural and Soils Laboratory at Weslaco, Tex.

Congress this year provided for 10 additional top-salaried Government positions for persons engaged in agricultural research. We expect this new policy to help us obtain and keep highly qualified research personnel.

ARS Regulatory Protection

The policy of public protection was applied more broadly than ever before in fiscal 1959. The opening of the St. Lawrence Seaway, with its ports for ocean vessels in the heart of the Midwest, added to our regulatory responsibilities.

Once every 20 minutes on the average plant quarantine inspectors stopped destructive insects from entering the United States.

Because of the Animal Inspection and Quarantine Division, no new animal or poultry disease of foreign origin gained entry into the United States.

The Meat Inspection Division, working in 546 cities and towns, inspected over 99,400,000 food animals and passed more than 99,176,000 of these as wholesome and fit for consumption.

In the Southeastern States, cooperative efforts to eradicate screw-worm by distributing millions of sterilized male flies moved ahead with dramatic success. Apparently, the pest is now virtually wiped out in this region.

We joined with Mexico in undertaking a joint study of screw-worm infestation to determine if these eradication methods could be applied to the much vaster area of the Southwest and Mexico.

Another eradication campaign has virtually eliminated Hall scale, once a threat to the entire U.S. stone fruit industry.

The brucellosis eradication program reached a milestone during the year when half the counties in the United States and its possessions became modified-certified-brucellosis free areas. This disease causes undulant fever in man. In 1947 there were 6,300 human cases of undulant fever. In 1958, there were only 600.

Tuberculosis in cattle has increased at a slow, but steady rate since 1955, a warning that has led to intensified USDA–State efforts against this disease.

New laws passed during the year reflect a growing awareness of the need for stricter safeguards against plant insect pests and diseases.

Federal regulations were previously concerned with the major carriers of foreign pests—plants, plant materials, and soil. Now regulations are also concerned with the pests themselves—insects, mites, nematodes, protozoa, bacteria, fungi, parasitic plants, and viruses.

Moreover, Department regulatory officials may now seize infested items and take other necessary action in an emergency to prevent the introduction or spread of a plant pest. In the past, such action depended largely upon State authority, or upon the voluntary cooperation of those directly concerned.

The humane slaughter law (Public Law 85–765) became effective during the past year, with responsibility for its administration assigned to the Meat Inspection Division of ARS. Under the law, and with the advice and consultation of a Humane Slaughter Advisory Committee, the Department designated three methods of humane slaughter. These include chemical (carbon dioxide), mechanical (captive bolt and gunshot), and electrical (stunning with electric current). Humane methods of handling livestock prior to stunning also are designated in the law. Ritual slaughter was declared humane by the law and exempted from requirements of the act.

Packers offering meat products for sale to Federal agencies after July 1, 1960, must comply with the law. We have begun research aimed at assisting small packers to adapt the humane methods to their operations.

Marketing Research

The Agricultural Marketing Service continued to press marketing research progress vigorously in 1959.

Highlights of the year's accomplishment in the four major fields include:

Developing and fostering use of better facilities and methods for handling and transporting farm products. The development of plans for new terminal markets in cooperation with local and State governments is included. Two new terminal markets began operation during fiscal 1959. Atlanta, Ga., opened a new $10 million facility, and Philadelphia, Pa., replaced the historic, but inefficient, Dock Street market with a new wholesale food distribution center which when completed will cost an estimated $100 million.

Marketing researchers also developed improved methods of handling and transporting farm crops and livestock. A new type of apple pallet box filler can, if widely adopted, save the apple industry over $1 million a year. Designs for an improved warehouse for storing flat bales of cotton offer savings of $10,000 to $15,000 over most present storages in construction costs per compartment.

A new way to hold down weight losses of hogs shipped by truck in hot weather was developed and demonstrated; correct practices and equipment for shipping meats by the piggyback (truck-and-rail) method were described; shipping containers for frozen turkeys were compared for adequacy and economy; improved loading methods for apples shipped by rail and truck were tested; proper temperatures for shipping citrus fruits abroad were determined; and similar work was done in other fields.

> The St. Lawrence Seaway was opened in May 1959. Before the seaway was completed, however, marketing research had given the grain industry information on costs of shipping via the new route. For example, shippers could save up to 14 cents a bushel in charges for grain shipped to Europe. During the first month's operation more than 43 million bushels of grain were moved via the seaway; this was far more than the industry expected.

A study of the New York City wholesale fruit and vegetable market completed during the year indicated that construction of a modern and efficient market might produce savings of nearly $10 million a year.

Reducing spoilage and waste and maintaining high quality. Spoilage of agricultural products on the way to market hurts both farmers and consumers. Our scientists are striving to (1) reduce spoilage and maintain quality, (2) develop better measures of quality, and (3) protect against insect infestation.

Working with the National Cotton Council and Clemson Agricultural College, we opened a new facility at Clemson, S.C., for cotton quality and related research.

We now know that poly-lined crates of strawberry plants if held at proper temperature may be stored from 8 to 12 months.

A new machine that reveals the degree of insect infestation in stored wheat was developed.

A new automatic peanut sampler capable of saving thousands of dollars a year in grading operations was developed. It can be used on grains also, with large savings.

Making available to consumers new or more attractive products. Tests of the market potential for artificially sweetened and sugar-sweetened grapefruit juice, cultured sour cream, and a newly developed cantaloup were highly encouraging.

Researchers checked with homemakers on the characteristics they liked or disliked in various agricultural products. Our studies included homemakers' use of and opinions about eggs, mothers' opinions of cotton and other fibers in children's clothing, and a consumer appraisal of imported wool fabrics in clothing.

Another project compared commodity standards with consumer desires. For example, we asked consumers to rate frozen peas in relation to Federal grades. These tests help us to adjust grade standards to give consumers more precisely what they want.

Better business practices and principles to hold down marketing costs. Substantial progress was made in studying and pointing out possible economies in poultry processing, grain milling, rice milling, feed mixing, fruit packing, oilseed processing, frozen-food wholesaling and other fields.

Research reports on costs and margins showed the differences between buying and selling prices at each level in marketing between farmers and consumers. Research on margins helps to indicate segments of the marketing channel in which efforts to cut costs might be most effective.

Federal-State Matching Fund Program (1959)

Marketing service programs using matched Federal and State funds were conducted by State departments of agriculture in 41 States and Puerto Rico during the fiscal year. These programs assist producers and marketing agencies in finding answers to marketing problems through use of research findings and adoption of the best marketing practices known. The work falls into four general fields: (1) Improving and maintaining the quality of agricultural commodities, (2) expanding outlets for agricultural commodities, (3) increasing marketing efficiency and reducing costs, and (4) assembling and disseminating marketing information.

CONSERVATION AND LAND USE

The conservation of soil, water, and timber resources continues to be among the most important goals of the Department. Conservation is important not only as a means of assuring the permanent productivity of U.S. agriculture but also as a method of helping achieve balanced farming.

The Conservation Reserve

The Conservation Reserve Program in 1959 proved an effective attack on the source of the surplus problem. Under this program substantial amounts of farmland have been shifted out of production for periods of 3 to 10 years or more. This has led in many instances to a permanent shift of such land to uses for which it is better adapted.

Our experience with the Conservation Reserve Program has shown that farmers will voluntarily cooperate in bringing about desired land-use adjustments. We know also that the Conservation Reserve can effectively aid farmers who wish to retire, relocate, or otherwise establish themselves. Approximately three-fourths of the land in the Conservation Reserve Program in 1959 involved entire farm units.

The comment of a farmer in Cass County, Ind., is typical.

> My family and I like the Conservation Reserve of the Soil Bank. The Government rental payment provides us with some income from our land. At the same time, we keep full control of the management and we are giving our soil a rest and building up its fertility.
>
> I have 106 acres of cropland on my farm. All of it is under a 5-year Conservation Reserve contract at $23.50 per acre. There is a permanent cover of vegetation on all the land under the contract.
>
> My family continues to live on the farm, but we will grow no crops during the life of the 5-year contract. If our land were in crop production, we could expect with normal yields to get about 75 bushels of corn to the acre, 30 bushels of wheat, 30 bushels of soybeans, or 3 tons of hay.

During the past 4 years nearly 23 million acres on 250,000 farms have been placed under contract and taken out of production. Contracts are for 3, 5, or 10 years depending upon the conservation cover to be established. When land has an acceptable conservation cover on it, the contract may be for 3 years. Contracts for land on which trees are to be planted must be for 10 years.

Conservation Reserve contracts require that the land in the program must not be cropped or grazed during the life of the agreement.

Of the total acreage under Conservation Reserve contract during the 1959 crop season, 17.5 million acres had been or were being estab-

lished in conservation cover. Grass cover was being established on 15.4 million acres; trees and shrubs on 1.8 million acres; cover especially beneficial to wildlife on 212,000 acres; and the balance to water impoundments.

The average annual payment for all land in the program was $11.53 per acre.

The program has speeded up reforestation over wide areas of deteriorated lands, particularly in the Southeast, and expansion of allied industries. Nearly 5 million acres of Great Plains land have been included in the Conservation Reserve Program, with most of these acres planted in grass to the longtime benefit of the Great Plains area.

Another benefit of the program is the wildlife aspect, which has the strong support of conservationists and other interested people, including many who are not ordinarily concerned with or interested in the problems of agriculture.

The accomplishments under the program clearly show that the Conservation Reserve offers a practical and feasible means of accomplishing, on an entirely voluntary basis, effective land-use adjustment. It achieves this adjustment without subjecting our farm people to further regimentation and without the necessity of the Government's having to take ownership of the farmland.

Agricultural Conservation Program Service

Owners and operators of 1,084,000 farms and ranches carried out conservation with cost-sharing under the Agricultural Conservation Program in calendar year 1958. Under the national ACP, farmers and Government share on about a 50–50 basis the cost of approved conservation practices.

The total assistance provided amounted to $219,916,796. Farmers paid their half in cash, labor, conservation materials, and the use of equipment.

Local programs are developed by Agricultural Stabilization and Conservation county committees (including farmer members and the Extension agent) and local technicians, with help from soil conservation district officials, FHA supervisors, vocational agriculture teachers, and others. The approved practices are geared specifically to the conservation problems of local farmers.

For example, in the three types of watersheds approved for operation by the USDA, ASC committees considered watershed conditions and objectives, and the readiness of local people to participate, in setting up land-treatment programs.

About 40,000 farms in these watersheds used $8,770,000 of ACP cost-sharing to establish conservation in 1958.

In the 11 approved Flood Prevention Watersheds, 27,603 farms used ACP cost-sharing amounting to $6,297,000.

In 55 pilot watersheds, 3,775 farms used ACP cost-sharing amounting to $786,000.

In 124 Public Law-566 watersheds, 8,492 farms used ACP cost-sharing amounting to $1,687,000.

The efforts of these farmers to hold and control rainfall on their land, and to manage excess runoff, helped lessen flood damage downstream.

The land-treatment measures carried out included establishment and improvement of grass and legume cover, planting trees and improving timber stands, installation of water-retarding and water-storage structures, stripcropping, contouring, terracing, sod waterways, and shelterbelts. Other practices such as conservation drainage, land shaping, channel and reservoir lining, and diversions and spreaders also helped control, manage, and conserve water.

The ACP stressed the twofold value of conservation and surplus control by encouraging sound land-use adjustments away from intensive crop production. Thus farmers established about 11 million acres of grass, legume, and tree cover with ACP cost-sharing, and improved 2,036,000 acres of existing vegetative cover, much of which would otherwise have been shifted to intensive crop production. Timber stands were improved on 321,253 acres. A total of 63,448 water-storage dams were built, and 54,000 acres of sod waterways established to control and manage water on farms.

Other significant accomplishments with 1958 ACP cost-sharing included:

Standard terraces	acres	855,861
Stripcropping	acres	486,482
Lime to permit growth of conservation cover	tons	16,844,971
Water diversions and spreaders	miles	4,828
Leveling land for water conservation	acres	345,941
Cropland tillage to control wind, water erosion	acres	1,475,915
Stubble mulch to conserve soil and water	acres	6,665,846
Drainage for conservation farming	acres	1,644,878
Competitive shrub control to conserve grazing land	acres	1,538,000

Required technical assistance was provided through the Soil Conservation Service and the Forest Service or State Forester.

ASC committees adjusted ACP allocations, practices, and cost-share rates in line with local conditions to help low-income farmers achieve maximum conservation benefits leading to increased farm income. In Rural Development Program pilot counties these approaches, coupled with increased educational efforts, were especially helpful.

The ACP Service actively participated in the nationwide inventory of soil and water conservation needs. When completed, this inventory will make possible better planning and operation of all conservation programs.

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Soil Conservation Service

There is an especially great opportunity today for conservation agencies to work cooperatively both with individuals and with groups and organizations. To do this effectively and intelligently our agencies must keep their approach modern.

A farmer near Milbank, S. Dak., has been helped to pay for $40,000 worth of new buildings and equipment during the past 10 years with extra profits made as a result of his conservation farm plan. In 1948 he became a cooperator with the Grant County Soil Conservation District. SCS technicians working in the district first made a soil survey and land capability map of the 400-acre farm.

Sheet erosion was moderately severe and gullies were forming in many places. Then this Milbank farmer and the SCS technician worked out a plan calling for a rotation which kept about one-third of the cultivated land in pasture or hay each year. He also installed other erosion control and soil-building practices as part of his plan, including contour stripcropping, grass waterways, stubble mulching, and diversions.

Having built up more than 100 acres of improved grasses and legumes, he decided to go into dairying. Since then he has built a new home, a modern barn and silo, and he has bought new farm equipment. And his soil is in better condition.

More than 1.8 million farmers and ranchers cooperated with their local soil conservation districts. About half of them received technical help from Soil Conservation Service technicians during fiscal year 1959.

SCS provided technical help to 2,847 of the 2,861 soil conservation districts in the 50 States, Puerto Rico, and the Virgin Islands. These districts include about 95 percent of all farms and ranches, and more than 90 percent of the Nation's farmland. Some 92,800 basic conservation plans were developed during the year, bringing to 1,279,634 the number of farms and ranches having such plans and embracing about 365 million acres. These plans provide a guide for using each acre within its capabilities and treating it with conservation practices according to its needs for protection and improvement.

Soil surveys on about 48 million acres were completed during the year and range site surveys were made on 14 million additional acres. More than 615 million acres now have soil and capability maps suitable for farm and ranch planning.

Through local soil conservation districts, SCS provided technical assistance on 2,647 water-management group enterprise projects.

These projects, involving improved irrigation, drainage, or other water programs affecting 23,087 farms and ranches, have benefited 1,847,000 acres.

A basic conservation farm or ranch plan is not a "format" but a concept or idea of sound soil and water management. It is the image, on paper, of the conservation methods which a farmer or rancher decides he wants to use once he has sound technical information on, and understanding of, his land's needs.

Soil conservation districts, the local unit of State government created for conservation action, have the job of pulling a wide variety of conservation programs and interests together into a program that effectively attacks local soil and water problems.

The effectiveness of district operations is largely determined by the kind of working relationships that exist between the district governing body and the many groups and agencies which help them do the conservation job. During the year, SCS took a number of steps to improve working relationships with soil conservation districts. The Service's longstanding policy toward districts and their business affairs was restated. A joint program of action developed by representatives of soil conservation districts and the SCS was developed and published. It emphasizes the responsibilities of each organization as well as methods whereby districts can make more effective use of technical facilities of the SCS.

Administrative action was taken where possible to increase the amount and improve the quality of technical help available to local districts, and the districts were encouraged to make full and effective use of USDA's conservation loan, cost-sharing, commodity, extension education, and other programs.

Some soil conservation district governing bodies have a policy of giving limited assistance to landowners who are nonfarmers. This is especially true on the west coast, in the Northeast, and in other areas where large acreages have gone into suburban or industrial developments. Such help falls into two categories: First, consultation on land use and soil or water conservation problems; and two, onsite technical help requiring only small amounts of the technician's layout time. Such help usually has a lower priority than help to active farmers or ranchers. SCS is guided in this activity by the decision of the local district.

Requests to districts to help local or State planning boards are increasing rapidly. Good advice in the beginning helps promote better land use and provides for future application of effective soil and water conservation measures. Many "rurban" requests to date have resulted from past mistakes in land use or failure to apply soil and water conservation measures of any kind. Improper use of soils, poor drainage, and lack of knowledge about the subsoils have led to most of the serious problems.

Watershed Protection and Flood Prevention

The Green's Lake watershed covers about 10 square miles above Cedar City, Utah. It has had floods for many years, mostly on farmland. But housing developments, public buildings, and other Cedar City improvements have been established on the broad flood plain. An unusually big flood in 1956 caused damage to homes, streets, and farmland estimated at $100,000.

Local organizations sponsored a joint application to the Soil Conservation Service and the State of Utah for a watershed protection and flood prevention project under Public Law 566. The application was approved and development of a work plan was started in January 1957.

Local cooperation was excellent. A watershed committee of local people tackled problems as they developed. When test pits were needed, Cedar City hired a backhoe and furnished rodmen for preliminary surveys; Iron County commissioners relocated a county road and the State highway department agreed to a floodway under U.S. Highway 91. A rancher gave up the use of a portion of his range for 5 years. Another rancher moved his sheep off the watershed to another range which Cedar City leased for him.

The work plan called for installation of both land-treatment and structural measures. The Agricultural Conservation Program Service shared the cost of clearing, seeding, and fencing done by the ranchers. The Bureau of Land Management helped plan the measures on its public land and moved ahead rapidly. By June 1959, 95 percent of the land-treatment work in the watershed was completed.

Structural measures included three debris basins, two retention dams, and a floodway channel. The local contracting organization awarded a contract for construction in January 1958.

Local organizations over the Nation, similar to those of Cedar City, Utah, have submitted 1,148 applications for assistance in watershed protection and flood prevention work covering more than 82 million acres. Planning assistance had been approved for 446 of these small watersheds by the end of the fiscal year. The beginning of actual operations had been approved on 180 watersheds covering 10,387,551 acres. Conservation land treatment was progressing satisfactorily on all watersheds.

Watershed protection and flood prevention work was continued on 39 pilot watersheds during the year. Flood prevention operations went forward in the 11 authorized watersheds (under the act of 1944) covering more than 30 million acres. Structural measures have now been planned for 179 subwatersheds, covering about 15,442,508 mil-

lion acres, and planning is proceeding in other subwatersheds as rapidly as local interst and support warrant.

The SCS worked with State agencies responsible for approving Public Law 566 applications to develop mutually acceptable principles for establishing priorities of work on watershed projects. Standards for judging the soundness of watershed projects have been strengthened. To assure watershed protection and flood prevention programs of maximum public benefit, careful investigations of costs and feasibility are required. Requests for projects benefiting relatively few landowners, representing an unusually high cost per acre, or likely to result in substantial increases of allotment crops that are already in surplus supply, are discouraged.

Since funds for construction are limited in relation to needs, single-purpose watershed projects are usually given a lower priority than multiple-purpose projects where local people are willing to participate in related water management measures. The Conservation Needs Inventory now being completed will help in classifying small watersheds on the basis of probable feasibility and prospective timing of the project development.

Great Plains Conservation Program

About 2,900 farmers and ranchers operating 7.8 million acres in the Great Plains are attempting to stabilize the agriculture of this important region through better land use and conservation measures with the aid of the Great Plains Conservation Program. In addition to the soil- and water-conserving practices, these operators have contracted to retire about 263,000 acres of marginal land from cultivation and plant it to grass or other permanent vegetation.

The program is going forward at an increasingly rapid rate. Soundly based, it is accomplishing its objectives. Requests for aid under the Great Plains Conservation Program exceeded the $10 million appropriation available for the year.

Snow Surveys

Working with Federal, State, and local agencies and private enterprises, SCS obtained accurate snowpack information on nearly 1,300 snow courses in the Western States during the winter and early spring of 1959. Early spring estimates of water available for irrigation helped farmers plan cropping systems and forecast probable water supplies during 1959.

Conservation Needs Inventory

Many USDA agencies are participating in the national inventory of soil and water conservation needs scheduled for completion in 1960. The inventory will facilitate both longtime planning and immediate operations. It will enable the Nation to set objectives and goals to achieve a balanced soil and water conservation program; to appraise assistance to districts within the States in relation to

needs and progress; to obtain systematic classification and appraisal of watershed project possibilities within the States.

Other Programs

The soil and land capability information supplied by SCS became of increasing importance in planning local rural development programs.

SCS technicians assisted Agricultural Conservation Program participants on about 361,000 farms and ranches with permanent-type practices on which cost-sharing was requested.

The Service provided technical assistance to about 9,300 participants in the Conservation Reserve Program.

Assistance to the Farmers Home Administration in its conservation and watershed loan programs continued.

Technical assistance and consultation were provided for various State and Federal agencies, and work was continued with the Army Engineers and Bureau of Reclamation on river basin investigations.

Forest Service

Our national forests are a vast storehouse of natural resources. Embracing 181 million acres in 39 States and Puerto Rico, they cover an area bigger than Italy and Japan combined. Improved management and protection in recent years have increased their value and service.

Here are a few outstanding facts showing what is being accomplished:

In calendar year 1959, 81.5 million recreation visits were made to national forests, exceeding 1958's total by 13.5 million.

National forest timber sales and other land uses, under multiple-use management, pushed cash receipts in fiscal 1959 to an alltime high of $124,067,682.

A record 8.3 billion board feet of timber was cut from national forests and related land-use lands, accounting for $113,896,781 of the gross receipts.

The billionth dollar in national forest receipts was deposited in the Federal Treasury, representing total cash income since the Forest Service was established in 1905.

An outstanding advance was made in tree planting—2,116,000 acres, or more than 2 billion seedlings planted. Ninety percent of this was on privately owned lands where the need is greatest. The 1959 planting doubled that of 1957, the first year a billion trees had ever been planted.

A "Program for the National Forests" was presented to the Congress on March 24, 1959. When put into effect it will mean much to the American people.

Under this program the renewable resources of the national forests would be more fully used and the forests themselves would become permanently more productive.

The Program for the National Forests sets up long-range objectives looking to the year 2000 when the Nation may have an estimated 332 million people. It also outlines interim action proposals concerned with the needs of the next 10 to 15 years.

The interim program goals include:

More and better water. Watershed management and protection must be stepped up to increase the quantity and improve the quality of water yields.

More wood for the Nation. The annual timber harvest should be increased to 11 billion board feet through intensified sustained-yield management of present timber stands, growing more and better trees, reducing disease, insect, and fire losses, and improving utilization.

More recreation for millions. The needs of an expected 130 million annual visits must be met by 1969, 60 percent above the 81.5 million recreation visits in 1959. This requires completion and continuation of Operation Outdoors.

Better hunting and fishing. There is need to accommodate the dramatically increasing number of Americans seeking outdoor sport on the streams, lakes, and trails of national forests.

Better range, better grazing. Range resources need to be improved through intensified management, better range practices, and more balanced use to achieve sustained high-level forage production and better watershed conditions. Lands must be made available for grazing under conditions that promote individual and community stability.

Intensified protection. This will call for additional measures to prevent, detect, and suppress forest insects and diseases, and improve equipment and techniques to control wild fires.

An expanded road system. There are now 24,400 miles of forest highways, 149,700 miles of forest development roads, and 112,200 miles of trails. When fully installed, there would be about 70,000 miles of forest highways and 542,000 miles of access roads, and the trail network will be reduced to about 80,000 miles.

Essential structures and equipment. Operating bases, including headquarters and housing for personnel, new fire lookout stations, equipment warehouses and other service buildings will be required.

Accelerated research. Forestry research would expand in forest genetics to produce better trees; in forest cutting practices to improve growth, protect soil, and increase streamflow; in finding new uses for low-quality timber; and in protecting forests from insects, disease, and fire.

Under this program, national-forest cash receipts could be expected almost to double in 10 to 15 years, rising to $210 million annually. The capital value of the lands, timber, and forage would go up about a billion dollars.

More jobs would become available. An estimated 620,000 people (an increase of 60 percent) would be employed in harvesting, processing, and marketing national-forest timber and its products. Local trade channels could be enriched by nearly $1 billion.

Finally, it is impossible to place an accurate dollar value on the great soil and water benefits which would accrue.

State and Private Cooperative Forestry

Fifty-five percent of U.S. commercial forest land belongs to farmers and other owners of small woodlands. Many of these holdings are less than 100 acres.

These small private holdings—involving 4½ million owners and 265 million acres—are not now in condition to produce their share of the wood products which a larger population will need.

Sponsored by the Forest Service and State foresters, 25 meetings were held across the country during fiscal 1959 and were attended by more than 5,000 small forest owners and community leaders. This constituted a step toward an overall program designed to begin to meet the problem.

Private interests, such as some forest industries, are also making headway in promoting better forestry. And encouraging results are apparent under Federal-State cooperative programs.

The Soil Bank Conservation Reserve Program, for example, was a big factor in making possible a planting of 2 billion trees in 1959.

In cooperation with State foresters, the Department provided technical management help to about 58,000 woodland owners, involving some 3½ million acres. Close coordination was achieved with the Agricultural Conservation Program which in many cases provided cost-sharing. Particular attention was given the Rural Development Program because many of the low-income rural areas have extensive timber resources.

Cooperative forest protection. Federal financial and technical assistance to States to meet the forest fire problem has three major aims: (1) To provide organized State protection to 435 million acres of non-Federal forest lands and nonforest watershed lands; 92 percent of this job has been completed. (2) To provide increased intensity of protection on 200 million acres; here progress has been slow due to inadequate financing. Over the past 5 years an average annual burn of nearly 2 million acres has occurred on the protected lands. (3) To reduce man-caused fires; these have been reduced from 116,000 annually 5 years ago to 65,000 in 1958.

Other areas of cooperative forestry achieving good results in 1959 were flood prevention and river basin work, and suppression of forest disease and insect outbreaks.

Forestry Research

Research has paid many times its cost in the broad forestry advances of the past 20 years.

Antibiotics have opened new avenues to the direct control of tree diseases, such as white pine blister rust. A pulping process utilizing low-grade trees is opening more markets for scrub and defective hardwood timber.

Aiding Foreign Forestry

Activities in servicing the U.S. International Cooperation Administration were centered in a new Office of Foreign Forestry Services. The services involved both technical support of ICA foresters assigned abroad on technical assistance and the training of foreign nationals in the United States and Puerto Rico under ICA sponsorship.

INVESTMENTS IN BETTER RURAL LIVING

Many factors are responsible for the improved rural living standards which are now at the highest level in the Nation's history. One of the most important factors in family living has been more know-how in farm and home management.

Cooperative Agricultural Extension Service

The Extension Service plays a predominant role in the dissemination of information on farm and home management. For example:

> The B. F. family of Michigan began working closely with Extension Service agents when they bought their 100-acre farm in 1954. They have made outstanding progress.
>
> By 1958, they had raised gross income per tillable acre from $85 to $103 and increased the annual labor income for the farm by $3,755. Close culling and feeding helped increase milk production by nearly 1,000 pounds per cow. In 1958, the herd average was 11,405 pounds of milk and 447 pounds butterfat.
>
> Nearly every year they have made improvements in their home, such as purchasing a washer and dryer, remodeling the kitchen, and adding a porch and a new oil furnace.
>
> Plans for the future include expanding the dairy herd and poultry flock, possibly adding a hog-feeding enterprise, and buying more land when it becomes available in the area.

This history is typical of the 70,000 families with whom Extension Service is cooperating in developing long-range plans through the Farm and Home Development Program. This work differs from other extension assistance in that it deals with the farm and the

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home as a unit. Solutions to problems are considered in the light of their effect on the total unit.

Farm and Home Development work centers on improved management. Agents help families think through longtime goals and carefully analyze farm and home problems. Together they study the resources available to the family and consider alternative courses of action for achieving family goals. The family then selects the course of action it feels is most satisfactory, and agents help the family carry it out. Sometimes this involves major adjustments in the organization of the farm or the adoption of improved farming or homemaking practices.

A sample of financial records of Farm and Home Development families in one State showed the families increased their income $10 for every dollar that the Extension Service spent to assist them. This, in turn, meant an increase of approximately $2 in Federal tax income for each Extension dollar spent.

As the educational arm of the Department, the Extension Service has been especially concerned with adjustment problems of people affected by the sweeping changes in agriculture and rural living in recent years.

A recent 2-year comprehensive study of Extension's programs, policies, and objectives revealed nine major program areas where Extension needs to intensify its educational assistance. Extension workers currently are adjusting their programs in line with these needs.

How Extension Operates

Cooperative Extension work in agriculture, home economics, and 4–H is a partnership undertaking involving land-grant colleges or universities, the U.S. Department of Agriculture, county governments, and local people. By carrying results of research and practical experience to the people and by helping them apply this information in solving their problems, the Extension Service functions as a nationwide system of off-campus education.

County Extension agents have been annually helping some 12 million families adopt improved farming and homemaking practices and the number is growing.

Four–H Club work annually reaches some 2.3 million members in well over 90,000 organized clubs. Home economics workers assist about 7.5 million families, and this number is also growing. Extension workers use mass media, farm and home visits, office calls, telephone calls, demonstrations, and meetings in their educational work.

County agents rely heavily upon voluntary, local leaders to help carry out Extension educational programs. These local volunteers act as organizational leaders and project or subject matter leaders. They serve on countywide advisory councils or committees in planning longtime county programs. About 1.3 million different local leaders help out in the various phases of Extension work. They hold

well over a million meetings annually without the presence of county Extension agents. To make sure that local leaders remain well informed, agents conduct thousands of leader-training meetings with total attendance of over 4 million annually.

Rural people need to understand and be able to appraise needed adjustments in light of new technology and changes taking place in agriculture and rural living. Consequently, in over 2,000 counties, Extension is helping people collectively analyze major local problems and build sound programs directed toward improving agricultural production, agricultural marketing, and family and community living. This work is called program projection.

The Extension Service is particularly concerned with the Rural Development Program and is putting marked emphasis on developing human resources in agriculture.

Efficiency

Extension continues to get more and more requests for help on problems involving efficiency of production.

> Numerous examples demonstrate how research and education can team up to increase efficiency. Research had shown that lack of nitrogen in Georgia soil seriously limited crop production and raised production costs. The Georgia Soil Fertility Program under the leadership of Extension agronomists and information specialists was developed to increase farmer awareness of this soil problem. The use of nitrogen for top and side dressing crops increased about 50 percent in 2 years, from 40,282 tons in 1956 to 60,265 tons in 1958. The program also encouraged Georgia farmers to switch from low-analysis, nonrecommended grades of fertilizer to the high-analysis, recommended grades. This change alone has already saved Georgia farmers an estimated $2 million.

In Louisiana, internal cork was a threat to the State's $20 million sweetpotato industry. Louisiana extension workers launched an intensive educational program to encourage farmers to use proper control measures. Planned and carried out in cooperation with seedmen, shippers, producers, processors, pesticide dealers, and research personnel, the drive reduced infection from an average of 45 percent to 6 percent in 2 years.

In Indiana, an Extension program to cut down wheat losses from smut saved Indiana farmers an estimated $5 million in 1958. Loose smut has long been a common disease of wheat. In recent years, however, a new race which attacked two of the four leading wheat varieties made the problem more serious. Although two new wheat varieties, Vermillion and La Porte, showed good resistance, Extension workers felt that precautions should be taken to hold the disease in check. They initiated a plan to limit certification of wheat seed

to seed not more than 3 years removed from foundation. This plan has helped keep fields planted to certified seed almost smut free, while fields planted to noncertified seed showed a smut count as high as 20 percent.

Home Economics

Extension work in home economics encourages family members to use knowledge and skills drawn from many sources to help solve the complex problems affecting the family's needs at home, in the market, and in the community. This work includes education directed toward managing time, money, energy, and abilities to provide the most satisfaction for all members of the family.

4–H Club Work

The Extension educational program for youth is changing rapidly to keep pace with the Nation's population shift and growth, as well as changing patterns of farm, home, and community. More time and effort are being spent in career exploration for 4–H'ers. Many young rural people have no intention of farming. Youth educational programs should include opportunities for young people to investigate careers in agri-business, including marketing, distributing, and processing work closely related to agriculture—as well as in other areas.

New projects are being developed that will be of direct value to boys and girls who do not live on farms, but who want to participate in 4–H Club programs. These include automotive safety, landscaping and horticulture, buymanship and consumer education, care of light horses and pets, and many others.

Marketing

In the Extension Service, as in other agencies, more and more emphasis is being placed on marketing. The North Carolina Extension Service is developing a program for improving managerial capacity. It provides training in effective planning, organizing, directing, and controlling the operations of an agricultural firm. In its educational work with food retailing firms, Extension now includes the entire store operation, not just the improvement of such skills as trimming and displaying produce, cutting meat, and cutting, packaging, and displaying poultry products.

> Early in the 1958 potato shipping season, railroads in northern Maine announced a reduced freight rate on potatoes loaded in cars of 50,000 minimum load. Using certain kinds of packs, however, growers were unable to load this minimum amount in some rail cars. An Extension marketing specialist helped develop a loading system to overcome this problem. Using meetings, special films, and television programs, he explained the new system to farmers. Farm-

ers saved approximately a million dollars in marketing costs for just the remainder of the 1958 season.

Extension cotton marketing and ginning specialists showed 29,000 farmers in 131 Georgia counties how to supply ginners with cotton containing less contamination from leaves, trash, grease, and other foreign materials. In 1958 alone, Georgia cotton growers realized over $2 million additional income because of this quality improvement.

Extension's consumer marketing programs also aid in developing more efficient marketing systems. Coordination of marketing activities in various States also contributes to more efficient marketing. In the North Central Region, a regional committee made up entirely of marketing workers jointly considers the major marketing problems of the area and plans concerted efforts to seek solutions.

Safety

Federal and State Extension Services conduct year-round activities in accident and fire prevention. About 100,000 volunteer local leaders in some 2,900 counties have recently participated in farm safety extension work. They have helped about 3 million farm families follow recommended safety practices, and have trained roughly a million 4–H Club boys and girls in farm, home, recreation, and highway safety.

The Extension Service also plays an important part in promoting the safe use of pesticides. Some type of pesticide is used on practically every farm in the United States; yet only six fatalities through their use were reported in 1958.

Public Affairs

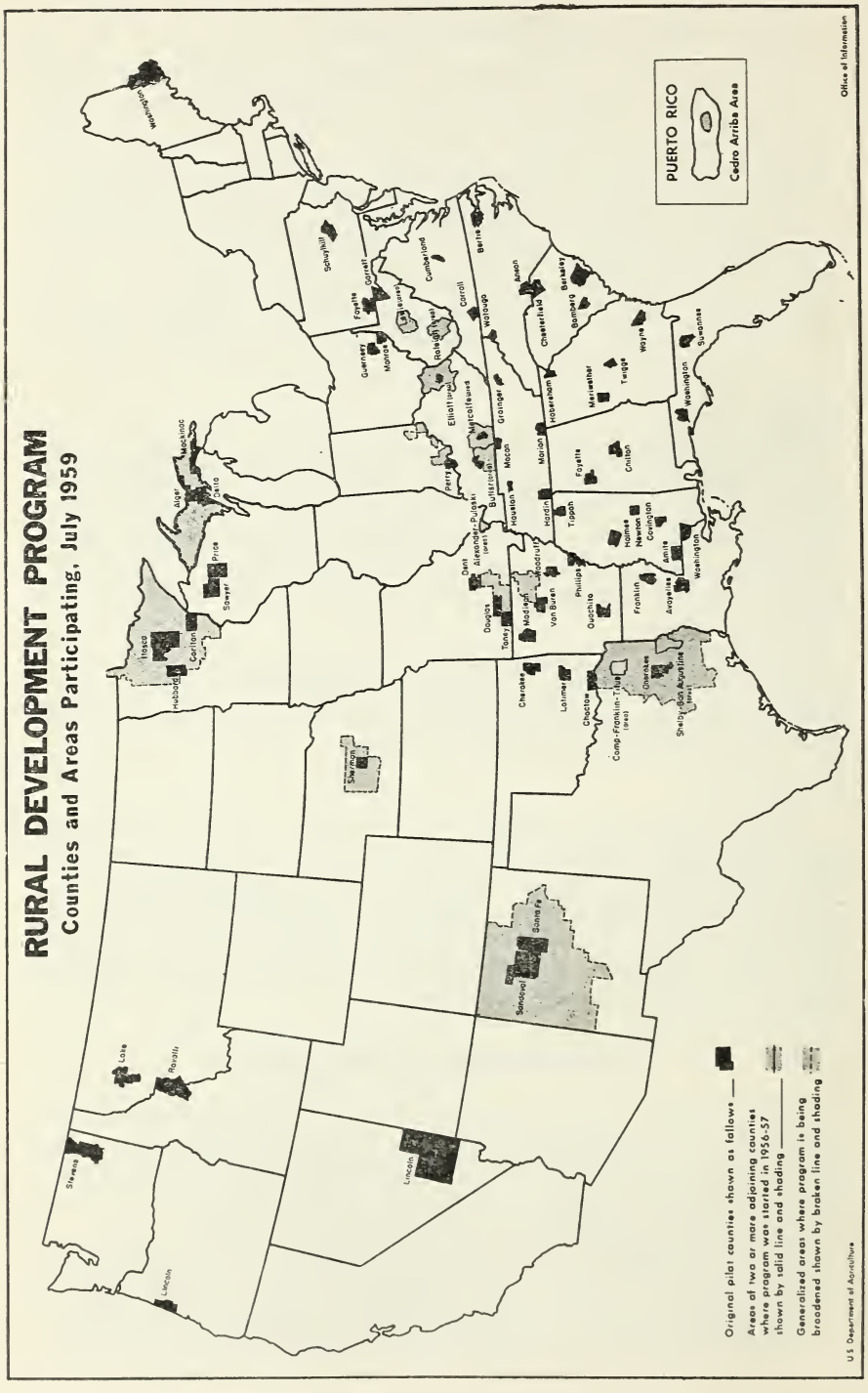
While the Extension Service does not seek to determine the policies rural people should follow, its educational programs in public affairs give people (1) a more active interest in public affairs, (2) a better understanding of the policies and principles involved, (3) a sound basis for critically examining evidence and for logically arriving at intelligent decisions, and (4) a greater desire to participate effectively in solving public problems.

Rural Development Program

There has been a steady expansion of the Rural Development Program since its inauguration in 1955–56 on a pilot basis, with various agencies playing important parts. Experience gained in the original areas by participating agencies and groups has resulted in a widening of the program beyond this pilot stage in many States.

Some 200 counties have now been included in Rural Development Program areas in 30 States and Puerto Rico. Leaders in other States are planning programs based on the Rural Development approach.

A major achievement is a growing national awareness that unem-


RURAL DEVELOPMENT PROGRAM
Counties and Areas Participating, July 1959
PUERTO RICO
Cedro Arriba Area
Original pilot counties shown as follows
Areas of two or more adjoining counties where program was started in 1956-57 shown by solid line and shading
Generalized areas where program is being broadened shown by broken line and shading
U.S. Department of Agriculture
Office of Information

ployment and underemployment among rural people have a seriously harmful impact on the Nation's economic and social life.

About 44 percent of our 4.5 million farms have 91 percent of the farm product sales by value. For the other 56 percent, sales of agricultural products are so small they have little effect on the total output and marketing of agricultural products.

There are fundamental differences between the larger commercial family farms and these small commercial, part-time, and residential farms. On the latter, lack of capital, land, and managerial ability is often a massive barrier to income improvement through better farming. Since low production farms sell little, they gain little benefit from agricultural price stabilization programs. The majority of farmers operating such farms depend largely on other work for their cash incomes.

This contrast is brought out plainly by the agricultural situation in those counties taking part in the Rural Development Program. According to the 1954 Census of Agriculture, 80 percent of farm operators in these counties sold $2,500 worth of products or less. Value of farm land and buildings was about one-third the national average per farm. Nearly one-half the farms in these counties were classified as part time or residential.

Working closely with local groups, land-grant colleges and universities, with the assistance of all appropriate Federal and State agencies, are meeting the problem on a broad front through the Rural Development Program. Industrial and other enterprise development, educational and vocational training, better sanitation and health, as well as more efficient farming and marketing, are all included.

During 1959 participating counties and areas in all regions of the Nation improved both farm and industrial opportunities. Projects resulting directly from the stimulus of the Rural Development Program, i.e., the leadership of town and community committees and the increased contribution of agencies assigned to the program, were responsible for much of this improvement.

> Approximately 320 communitywide projects to improve farms and farming were started or expanded in Rural Development counties during recent months. These included farm and home construction, production and management changes on small farms, improved practices, and others. More than 200 projects were aimed at commercial production of higher income products, such as vegetables, poultry, and livestock. Thousands of families on small farms profited directly from these activities.
>
> Farm marketing is receiving attention. New packing plants have been built, financed by local capital, cooperative marketing associations formed among small farmers, and additional market outlets established. Sixty such projects are reported in 44 counties.

Several rural towns participating in the program report an impressive number of new jobs resulting from continued industrial expansion. Wood planing and finishing, food handling and processing, clothing manufacture, feed milling, charcoal manufacture, and boatbuilding are some of the industries reported. Due to this and other industry growth, some 8,000 additional jobs were reported in 52 Rural Development program counties during fiscal 1959.

The special needs of young people growing up on low-income farms in these areas are recognized through educational and training programs, communitywide stay-in-school campaigns, vocational guidance, and others. About 145 such projects are reported in the program area.

Other local activities of special importance started or accelerated as a result of the Rural Development Program in 1959 were forest improvement, soil and water conservation and land planning, economic base studies, farm and home planning on individual small farms, and community organization to promote better living.

To keep pace with expansion of Rural Development Programs, State departments and Federal agencies stepped up their assistance during the past year. These include the Departments of the Interior; Agriculture; Commerce; Labor; and Health, Education, and Welfare; the Small Business Administration; and the Council of Economic Advisers.

The Department of Agriculture through its Federal Extension Service again allocated special funds to land-grant colleges and universities. These in turn employed 143 agents to assist in the Rural Development Program. Twenty-one such agents now have statewide or areawide program responsibilities. The rest work in individual Rural Development counties.

In addition to its regular services in these counties, the Soil Conservation Service supplied 75 man-years of technical assistance. As a result, a total of 2,573 farms were provided with soil survey maps and other technical assistance in planning and using soil conservation measures.

Farmers, other landowners, and processors of 102 Rural Development counties received special technical aid in forest management and product marketing. The U.S. Forest Service assigned a specialist in each of its regional offices to work full or part time on forestry aspects of the program.

Agricultural Stabilization and Conservation Committees in 19 States increased the allocation of Agricultural Conservation Program cost-share funds to Rural Development counties, and 12 States and Puerto Rico increased rates of cost-sharing for selected conservation practices.

In 1959 the Farmers Home Administration, through its regular credit programs, increased the amount of loans in Rural Development counties by some $3 million over those made in the previous year.

In cooperation with the States, the Agricultural Research Service and Agricultural Marketing Service continued to support the Rural Development Program with important research concerning farm production, manpower, health, family living, and potential for economic development in disadvantaged rural areas. The Agricultural Research Service cooperates with 22 land-grant colleges and universities in this special project.

Encouraged by the Rural Electrification Administration, several local rural electric and telephone systems have supplied technical and promotional aid, leadership, and increased power and telephone services in connection with local Rural Development Programs.

The Farmer Cooperative Service also provided guidance for farmer cooperatives participating in the program. This agency issued two special publications to acquaint Rural Development workers with the role of cooperatives and credit unions in rural area economic growth.

The Department of Commerce, through its field offices and Office of Area Development, continued to assist local program leaders in development of nonfarm resources. Cooperating with State employment security agencies and extension services, the Department of Labor in 1959 opened demonstration projects in four States—Kentucky, Wisconsin, Tennessee, and Arkansas—to improve job development, community planning, and employment services in small rural areas. Programs of the Department of Health Education, and Welfare have a major impact in Rural Development areas, where low incomes often result from inadequate education, poor health, old age, and other social welfare problems. The Social Security Administration and local health, education, and welfare services provided technical aid and in some cases added personnel to counsel with Rural Development committees and work on special projects. During the period covered by this report, the Small Business Administration shared in a total of 63 loans for $2,540,885 to small firms in 48 of the original Rural Development Program counties.

Improvement of agency services in support of local Rural Development committees, coordination of the many agencies involved, and planning better technical services in rural area development work were some of the major concerns in 1959 of the Committee for Rural Development.[1]

The National Coordinator for the program, Dr. Harry J. Reed, representing the committee, visited 12 States and 8 Rural Develop-

[1] This committee was given added authority and responsibility by Presidential Executive Order 10847 issued October 12, 1959. Its members include Under Secretaries of the following Departments: Interior; Agriculture; Commerce; Labor; Health, Education, and Welfare; the Administrator of Small Business Administration; and a member of the Council of Economic Advisers.

ment counties between July 1, 1958, and June 30, 1959, to counsel and advise with State and local leaders. In addition, he has participated in regional and national conferences, and met with representatives of private organizations interested in the program.

In May 1959 a week-long national workshop was held in West Virginia, under auspices of the committee, to train agency personnel assisting in the Rural Development Program. Attended by 200 persons working on the program in the 30 participating States, plus observers from 4 other States, the workshop included training sessions in best methods of promoting farm, industry, and community development and increasing opportunities for rural people.

The record of Rural Development in its early years of operation has been a good one.

The task now is to broaden and accelerate the program even further. Drawing upon experience gained in the original "pilot" counties and areas, we need to include additional rural communities and trading areas. At the same time, leadership at all levels—Federal, State, and local—must continually be strengthened to cope with the challenges of this new approach. Not the least of this task is a continuing redirection of Government agency programs to meet the special needs of disadvantaged rural areas.

Farmer Cooperative Service

Farmers are more and more concerned about the problems and opportunities posed by the growth of vertical integration and the specialization involved in contract farming.

It is our conviction that wise use of economic integration by cooperatives, more competent management, improved membership relations, and better inventory and credit control will improve farmer cooperative operations.

The Department's Farmer Cooperative Service is giving special attention to vertical integration. It has made a series of case studies of highly integrated cooperatives and is developing some measures of the extent of integrated operations in cooperatives. Studies on integration in petroleum and dairy cooperatives have been completed.

A survey of more than 4,000 cooperative associations to determine the extent of training received by managers and board members from outside sources showed only one in four reporting such management training.

Of 4,500 cooperatives surveyed, about 59 percent reported having such incentive benefits as life, accident, health insurance; retirement payments; and other benefits.

The increasing size of cooperatives and complex operating problems have made effective member relations and understanding of cooperative principles and practices more difficult. With a view to improving membership relationships, FCS in fiscal 1959 helped plan three regional conferences for personnel working in this field.

A series of studies to find better ways to handle farmers' accounts was continued. The cost of credit is high in most areas and methods of better handling are needed.

Efforts to help strengthen the marketing operations of cooperatives were carried forward. FCS again sponsored a national conference for fruit and vegetable bargaining associations. A new cost study on egg marketing by selected cooperatives is now providing yardsticks for other associations to measure the efficiency of their operations. Studies have also been made relating to the marketing problems of livestock, grain, and other agricultural producers.

FCS continued close cooperation with Extension Service and the land-grant colleges and universities. It joined with the American Institute of Cooperation in sponsoring a national conference for research workers in agricultural cooperation attended by representatives from 41 land-grant colleges.

During the year FCS completed 80 projects and issued 68 new and revised publications to report results of its studies. These are available to the nearly 10,000 marketing and purchasing cooperatives serving about 3 out of 5 U.S. farmers.

MARKETING OUR AGRICULTURAL ABUNDANCE

During the past several years the services of the Department of Agriculture to help farmers market efficiently have been made more nearly equal to its services in helping farmers produce efficiently.

In fiscal 1959 we continued and expanded still further our efforts to increase consumption of farm products at home and abroad. This was done not only through marketing research which we discussed earlier, but through special food distribution programs and cooperation with various commodity and food trade groups in vigorous merchandising of plentiful foods. In addition, the Department's activities in marketing order programs; regulatory work; market news; inspection, grading, classification, and standardization of farm products; and the information provided to farmers on agricultural economics and estimated supply and demand in various crops all contributed to more efficient marketing.

Agricultural Marketing Service

These following functions were carried out by the Agricultural Marketing Service.

Food Distribution Program

Governmental donations of surplus foods benefited more than 21 million people in this country in 1959, as food distribution activities continued to expand. For example, needy persons in family units receiving donated foods increased from 4.7 million in fiscal 1958 to a peak of 5.7 million in 1959.

Dried whole eggs were made available to welfare outlets for the first time.

During the month of peak participation in the National School Lunch Program, a record daily average of 12.1 million children ate lunches at school. About 10 percent of the lunches were served free or at reduced rates to children from low-income families.

> In eastern Kentucky, where several counties have been hard hit by coal mining unemployment, many children got their most nourishing meal of the day at their schools.

The School Lunch Program creates increasingly significant opportunities in market development for food. In 1959, for the first time, the Department distributed to schools a special low-fat content frozen ground pork. It was so well received that trade groups are exploring its potential as a commercial product. The lunch program also boosts local food sales. Participating schools bought an estimated $510 million worth of food in local markets during fiscal 1959.

Consumption of fluid milk under the 1959 Special Milk Program totaled 2.2 billion half-pints. An additional 2 billion half-pints were served with the complete lunches under the National School Lunch Program. About 22 million children in schools, summer camps, and child-care institutions were drinking milk last year under the School Lunch and Special Milk Programs.

At the request of grower-industry groups, the Department undertook merchandising efforts to increase consumption of numerous foods in plentiful supply. Besides our regular monthly activities on seasonally abundant foods, special merchandising drives were carried out for dairy products, sweet corn, apples, eggs, potatoes, canned and frozen peas. Marketing of grain products was aided by support of the baking industry's August Sandwich Month promotion.

Federal Milk Marketing Orders

That the Federal milk marketing order program continues to benefit more and more farmers was evidenced by the addition of 11 new orders during fiscal 1959. There are now Federal milk marketing orders in 78 marketing areas throughout the country.

Initiated at the request of dairy farmers, these orders regulate handling and set minimum prices for about 40 billion pounds of milk annually—nearly 40 percent of all the milk sold wholesale by farmers. The program assures adequate supplies of pure, wholesome milk to more than 78 million consumers residing in the 78 marketing areas.

Fruit and Vegetable Marketing Agreements and Orders

During the 1959 fiscal year, 37 marketing agreements and order programs were in effect for fresh fruit, dried fruit, tree nuts, vegetables, and potatoes. A new order covering tomatoes in the Rio Grande Valley of Texas was put into effect during the year. The

trend is toward more marketing agreement and order programs in fruits and vegetables.

Regulatory Acts

An amendment to the Packers and Stockyards Act enacted in September 1958 extended the jurisdiction of the Department of Agriculture to all livestock transactions in interstate commerce.

A vast posting program was undertaken to bring under regulation all of the livestock markets made subject to the new legislation. At the end of the 1959 fiscal year, 1,528 markets had been posted, 928 more than a year earlier.

The amendment also called for registering under the act and bonding all livestock dealers and market agencies engaged in interstate commerce, whether or not they operate on posted markets.

Imports of agricultural and vegetable seed in fiscal 1959 were the largest for any year since the Federal Seed Act became effective in 1939. Imports from 24 countries totaled over 306 million pounds of 110 different kinds of seeds. In addition, nearly 1 million pounds of seed were refused admission because they did not meet Federal Seed Act requirements.

An educational campaign to promote a better understanding by the fruit and vegetable industry of the services available under the Perishable Agricultural Commodities Act was stepped up in 1959.

Rapid expansion in the Nation's grain storage facilities during fiscal 1959 was reflected in a 21-percent increase in licensed capacity under the U.S. Warehouse Act, administered by the Agricultural Marketing Service.

Market News Service

Livestock market news service was extended during the year to cover more thoroughly auction markets where an increasing number of livestock are sold. Hog market reporting and hog price quotations were modernized in January, when provision was made for establishing detailed price quotations on hogs by individual grades as well as by mixtures of two or more grades.

New reporting points, extension of reporting to more marketing areas and trading levels, and an increase in volume-price reporting improved the service rendered on dairy products. A market news office was opened in Kansas City in July 1958 to centralize regional and national marketing news data for dairy products.

A weekly Georgia commercial egg movement report was started in February 1959. Gathering of similar data was initiated throughout the country preliminary to initiating a national egg movement report. Based on information received from firms or producers handling 300 or more cases of eggs a week, these reports give significant changes in egg movements. The consolidation of market news reports on eggs and poultry issued from Philadelphia and New York made new economies possible. New York now issues the egg report and Philadel-

phia the poultry report. A similar arrangement was put into effect for St. Louis and Chicago. Daily dairy products market reports formerly issued at New York, Philadelphia, and Boston were combined into one report issued from New York.

Major emphasis on closer supervision and improved working relationships with cotton quotations committees in the 14 designated spot cotton markets resulted in more frequent meetings of the committees and in developing more specific price data as a basis for quoting of prices.

An annual summary of rice marketing for the United States was published for the first time, covering both southern and California rice.

During the 1958–59 marketing season, tobacco market news services were furnished to all auction markets and the tobacco trade.

Industry interest in fruit and vegetable market activities at shipping points provided the incentive for a weekly f.o.b. review—a current report on market condition, crop progress, and trends at the country level. Response from the industry has been outstanding—the report already has the longest mailing list of any single fruit and vegetable market news report, with more than 5,000 names.

Citrus f.o.b. reporting was begun by the Los Angeles office at the request of the industry because of an increase in direct buying of citrus.

Inspection, Grading, and Classing

The Poultry Products Inspection Act, requiring Federal inspection for wholesomeness for all slaughtered poultry and poultry products shipped interstate and in foreign commerce, became fully effective January 1, 1959.

A total of nearly 3.5 billion pounds (ready-to-cook weight) of poultry was inspected and certified as being wholesome during the fiscal year by USDA poultry inspectors.

The following comment was made by a poultry and egg firm in a Texas community:

> We have never had Federal inspection in plants within the city. Since going under the Poultry Products Inspection Act, we are operating under far more sanitary conditions. . . . The national chainstores are demanding inspected poultry because the housewives are demanding it. Our product is in demand because buyers can and do come into our plant to see the sanitary conditions under which we operate and the well-supervised condemnation of any unwholesome poultry.

Increasing demand for poultry and egg grading services during the year resulted in expansion of these programs.

The Poultry Division concluded its development work on a new objective grading system for certifying the quality of shell eggs pro-

duced and marketed under controlled conditions and meeting high-quality standards. This program, effective September 15, 1959, was developed at the request of the industry and was tried out during the year at a number of egg packing plants in various areas of the country.

The Department of Agriculture's Meat Grading Service took over all meat-grading work required by the Department of Defense. Previously that Department had done some of its own grading.

We received requests from some growers, feeder, and packer groups to discontinue the grading of lamb and mutton. Numerous comments on this proposal were received from those who desired the service to be continued. Work was undertaken to revise the standards to make them more useful to the industry. However, at the end of 1959 there was substantial disagreement within the industry on this matter.

Approximately 2.8 billion pounds of dairy products were inspected, graded, processed, or packaged under USDA supervision during the year. This represented a decrease of 18 percent from the previous year, due largely to reduced inspection and grading of Cheddar cheese in connection with purchases under price-support programs.

Total butter gradings during the year were 972 million pounds. Other dairy products graded included more than 1.5 billion pounds of dry milk, 245 million pounds of cheese, 12 million pounds of evaporated milk, and 54 million pounds of miscellaneous products such as sterilized whole milk, butter oil, and ice cream mixes.

Production of consumer-packaged butter labeled with U.S. grade identification increased to a total of 166 million pounds, or about 12 percent of the total U.S. production.

Inspections of grain increased to the highest level on record. In all, over 6 billion bushels of grain were inspected.

Export grain inspected at Great Lakes ports, for the calendar year 1958, totaled about 30 million bushels. For 1959, a tremendous increase occurred following the opening of the St. Lawrence Seaway. Inspections in 1959 are estimated at over 150 million bushels, an increase of 400 percent over 1958. Preliminary plans have been made to provide for inspection in Canada of U.S. grain transshipped at Canadian points along the St. Lawrence Seaway.

Ninety-three percent of total U.S. ginnings in the 1958–59 season was classed for farmer members of cotton improvement groups authorized under the Smith-Doxey Act. This is the highest percentage on record.

A serious problem in cotton classing is the shortage of qualified cotton classers available for appointment during the harvesting season. Training courses were conducted.

Inspection service was maintained on all of the 177 established tobacco auction markets, comprising 914 different warehouses. Under the Naval Stores Inspection Services a total of about 279,000 drum-

equivalent of rosin was inspected and graded, and 5.2 million gallons of turpentine were inspected and certified.

Inspection of both fresh and processed fruit and vegetable products hit record highs during fiscal 1959.

Standardization

At the request of agricultural industries, standards were revised for several commodities.

The official standards for oats were revised effective June 1, 1959; the standards for mixed grain effective August 1, 1959; and corn effective October 1, 1959; and the standards for feed oats and mixed feed oats were canceled effective June 1, 1959.

Standards for grades of nonfat dry milk were amended on April 1, 1959. During the year work was started on revisions of standards for grades of butter and of Federal specifications for ice cream, sherbets, and ices. Federal specifications for whole fresh milk, cream, and half and half, natural swiss cheese, and process swiss cheese were completely revised for interim use. In addition, a new Federal specification for fresh skimmed fluid milk was prepared for interim use.

A new series of "Institutional Meat Purchase Specifications" is now being issued by the Standardization Branch for large-scale buyers of meat. Use of the standardized specifications will eliminate confusion in filling contracts on the basis of the differing specifications previously used.

Four sets of standard grades for tobacco were revised and proposed standard grades for Maryland tobacco were made official.

At the close of the fiscal year, 286 U.S. grade standards were in effect on fresh and processed fruits and vegetables.

The 12th Universal Cotton Standards Conference was held May 25–27, 1959. All 14 of the foreign signatory associations in 10 importing and consuming countries attended, and representatives of 46 industry groups in this country, including producers, shippers, exchanges, mills, and ginners, participated actively in the work of the conference. The purpose of the conference was to approve copies of standards now in effect and to discuss needed revisions in the standards.

Agricultural Estimates

We are constantly seeking improvements in the crop, livestock, and price reports.

During fiscal 1959 we expanded the quarterly cattle-on-feed program to include 8 more States, bringing the total to 21. The program will be further enlarged for 1960. The estimated cotton acreage for harvest is now published in our August 1 report, instead of a month later. We began forecasts and estimates of the Florida tangelo crop. A report on how potatoes are utilized was issued by the Department for the first time.

In January 1959, we revised the indexes of prices paid and prices received by farmers. These revisions—the first since 1950—reflect shifts since 1937–41 in the relative importance of the many commodities farmers sell and buy.

Mailed questionnaires have been the principal means of gathering information on prices paid to farmers. In an experimental program in Ohio, however, data were collected by an enumerative survey in which about 900 farmers were interviewed.

The intensive program to develop more complete statistics on commercial poultry flocks and to improve the egg production estimates moved ahead in Connecticut, Massachusetts, Indiana, Minnesota, Iowa, Georgia, and Texas.

A pilot study in eight Western States aimed at improving estimates of certified alfalfa seed production showed that earlier and more reliable estimates are feasible.

We continued the active Research and Development Program in Agricultural Estimates.

We made preliminary studies with a view to expanding agricultural estimates work in Hawaii and beginning it in Alaska.

Under our program for foreign visitors and trainees, the Agricultural Estimates Division assisted some 757 foreign visitors from 60 different countries.

Agricultural Economics

We continued our research on the factors affecting prices of agricultural commodities and on the long-run demand prospects. The results were applied to analyses of the possible effects of alternative agricultural programs on farm prices and income, and the long-run need for land and water resources in agriculture.

The periodic Outlook and Situation Reports continued to appraise farmers of the supply-and-demand prospects for the principal agricultural commodities during 1959.

In an important surplus area—fats and oils—emphasis was placed on an analysis of export outlets. With U.S. production considerably in excess of domestic requirements, the Public Law 480 program, accounting for about two-thirds of total exports of edible oil, has assumed great importance for these commodities.

Several publications issued in 1959 provided farmers and businessmen with improved statistics on economic trends affecting various commodities. A new bulletin covering egg and poultry statistics is the most comprehensive USDA publication in this field since 1937.

Because of renewed interest in the extra-long staple cotton situation, we issued a special statistical bulletin, the first since 1953, for this commodity.

The Department worked closely with the Bureau of the Census on decisions regarding the collection and publication of production and inventory statistics in the 1959 Census of Agriculture and the counting of farm people in 1960.

The new definition of what is a farm will employ criteria of land acreage and value of farm products sold. The effect of the new definition will be to lower substantially the level of farm population by removing from the total classified as farm residents many families who sell little or no farm products, but who now report themselves as living on farms.

In cooperation with the Social Security Administration and State agricultural experiment stations, studies are underway in two States on the experiences of retired farm operators now receiving benefits under the Social Security Program, based on coverage earned as farm operators.

In consultation with interested Federal agencies, we conducted a nationwide study on the participation of rural youth in higher education.

Foreign Agricultural Service

Expanding Foreign Markets

Fiscal 1959 was among the best years in history for U.S. agricultural exports. Farm products valued at $3.7 billion flowed abroad, mostly for dollars.

Though this was somewhat below the $4 billion of fiscal 1958, because of lower unit prices on the world market and a substantial decline in cotton exports, the quantitative volume of the previous year was maintained.

This huge export movement helped to meet the needs of friendly countries. Our exports, representing the equivalent of the production of 40 million U.S. acres, or 1 acre out of every 8 harvested, also strengthened domestic agricultural prices.

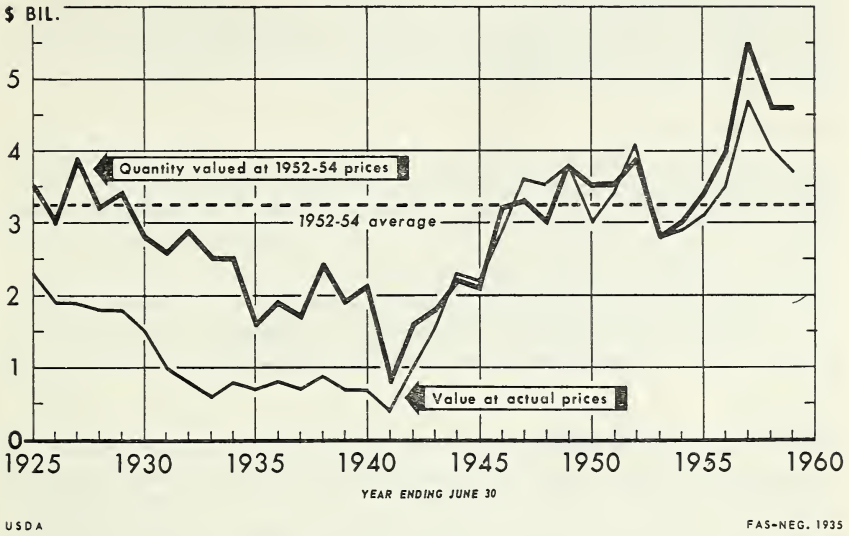
Our agricultural export trade faced major problems during the year.

For one thing, the Communist countries mounted a growing economic offensive. As the year opened, we were seriously concerned because of efforts by the Sino-Soviet bloc to shrink world market outlets for farm products or control them for political purposes. We warned American agricultural export interests that Communist strategy apparently was shifting emphasis, at least temporarily, from military to economic aggression.

The Soviet Union's trade offensive continued throughout fiscal 1959, and showed no sign of slackening as the year ended. Communist China's threat became less serious, however. Smaller-than-claimed production, and transportation and other internal difficulties took much of the steam out of the Chinese trade drive.

Another problem was the 51-percent drop in value of cotton exports, partly because U.S. cotton was substantially undersold by foreign growths of equivalent quality. The Department on February 4, 1959, announced a competitive pricing policy providing for an initial export payment under the payment-in-kind program of 8 cents

U. S. Farm Export Volume Maintained In 1958-59; Some Decline in Value



per pound for cotton shipped in the marketing year beginning August 1, 1959. The payment had been 6.5 cents. As a result, exports for fiscal 1960 will show a sharp increase.

A substantial rise in imports of cattle, and beef and mutton placed a special responsibility upon the Department during the year. A decline in U.S. beef production and an increase in U.S. prices in 1958 resulted in greater beef and mutton shipments to this country from Australia, New Zealand, and Argentina. At the same time, abundant feed supplies and good demand for feeder cattle led to the importation of a record number of feeder animals from Mexico and Canada. The U.S. livestock and meat industry was kept informed promptly about the situation as it developed, and therefore was better prepared to meet the competition. A special representative was sent to Australia and New Zealand to report on prospective beef and mutton competition from those countries.

The Selling Job

Through a reporting network of agricultural attachés around the globe and our traveling commodity marketing specialists, our Foreign Agricultural Service kept U.S. agricultural trade interests constantly informed regarding foreign marketing opportunities and existing or potential competition. Our analysts in Washington furnished country-by-country studies which pointed up sales possibilities and were valuable in shaping policies affecting U.S. agricultural interests.

Other foreign market promotion activity included: (1) The administration of title I of Public Law 480 under which farm products are sold abroad for foreign currencies; (2) market development projects financed in part with foreign currencies and partly by private trade groups; (3) reporting foreign monetary problems and helping solve them; and (4) helping to lower or remove foreign barriers to imports of U.S. agricultural commodities.

Trade Liberalization

During fiscal 1959 a number of nations took important steps to reduce discrimination against imports of U.S. farm products. The action reflected a new international financial situation arising from midyear measures taken by most Western European countries to make their currencies convertible for nonresidents.

Countries making important liberalization moves included Argentina, Australia, Denmark, France, West Germany, Italy, Japan, Malaya, the Netherlands, New Zealand, Norway, and the United Kingdom.

Private Trade Cooperates

We helped smooth the way to foreign markets, with private trade doing the actual promotion and selling. Help given cooperating private trade groups paid off in bigger foreign sales. Part of the foreign currencies accruing from title I, Public Law 480, sales was used in such market development work.

Poultry is a good example. By the middle of fiscal 1959, U.S. poultry sales to Europe reached an annual level of 22.5 million pounds. That was 34 times as much as Europe bought before a joint market promotion was started 3 years ago by the Department and the Institute of American Poultry Industries. European housewives knew little about U.S. poultry until they learned about it through the program.

Cotton is another illustration of this teamwork in developing foreign markets. An aggressive promotional campaign, begun in 1956 by the Department and the Cotton Council International, continued in fiscal 1959 in 10 European countries and Japan. After 2 years of this promotion, French cotton consumption was up 12 percent, German consumption 11 percent, and Japanese consumption 20 percent.

Uses of U.S. wheat and soybeans to improve the Japanese diet were demonstrated by means of 12 traveling kitchen buses in Japan.

Trade Fairs

A particularly impressive aspect of USDA private trade cooperation in marketing development was the display of U.S. agricultural products at international trade fairs. The number of such exhibits since the trade fair program began 4 years ago rose to 40 in fiscal 1959. The number of people viewing the exhibits in a total of 16

countries since the program began climbed to more than 20 million. A new feature in fiscal 1959 was a mobile exhibit telling about the quality and availability of U.S. feed grains. Other exhibit activity included displays of U.S. soybean products and frozen poultry and a milk recombining plant at the Spanish Agricultural Fair in Madrid; a supermarket in Barcelona; and displays of U.S. food products such as frozen poultry, fruit and fruit products, and other processed "convenience" foods at Lausanne.

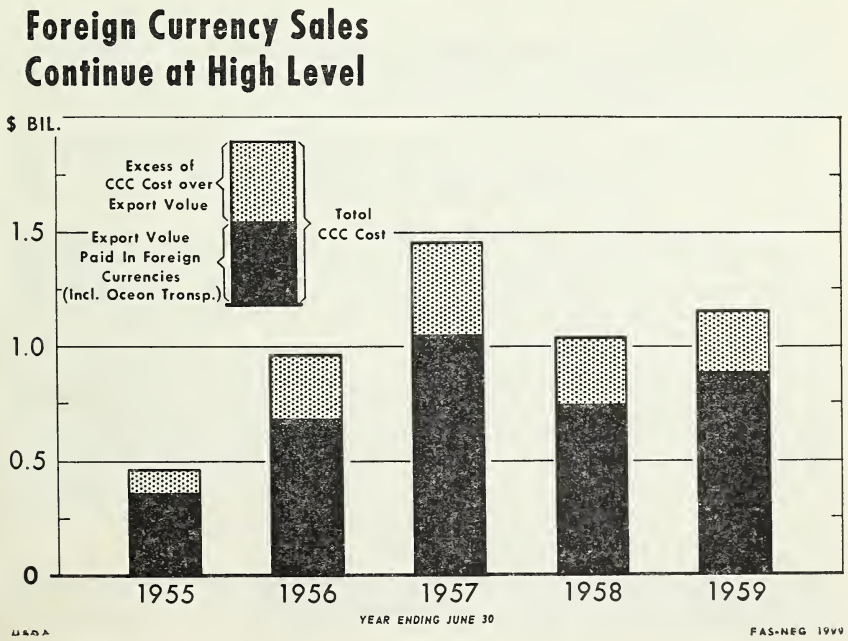
Public Law 480

Market development emphasis continued to be on dollar sales, and about two-thirds of U.S. agricultural exports moved outside of Government-financed programs.

One of those Government programs, however—Public Law 480—enabled many dollar-short countries to buy U.S. surplus commodities with their own currencies. The law also made it possible to move such commodities abroad as donations, for disaster relief, and through barter.

Sales for foreign currencies, under title I of Public Law 480, channeled the bulk of Government-financed exports abroad, accounting for actual shipments during the year valued at $729 million (export market value).

During the year, title I, Public Law 480, agreements were signed with 17 countries providing for the purchase of U.S. agricultural products having a value of $1,155,900,000 (CCC cost, including ocean



transportation financed by the United States). This brought the total number of agreements or supplemental agreements since the Public Law 480 program began in 1954 to 158. These agreements are with 38 countries, and the total valuation of commodities covered amounts to $5,078,500,000.

Foreign currencies received under title I of Public Law 480 were used for development of foreign agricultural markets, economic development, and other ways to advance U.S. interests abroad.

United States: Exports of farm products under specified Government-financed programs, 1958–59, compared with total exports of farm products

Program	*Amount exported (value)*
Public Law 480:	*Million dollars*
Title I, sales for local currency	729
Title II, disaster relief	56
Barter	144
Donations	133
Total, Public Law 480	1,062
Mutual Security Act, secs. 402 and 550, sales for local currency, and economic aid	210
Total exports under specified Government programs	1,272
Total exports outside specified Government programs	2,448
Total exports	3,720

Food for Peace

The President, in his 1959 farm message, urged the utilization of agricultural surpluses in the interest of peace and the well-being of friendly people of the world.

Representatives of the four other major wheat-exporting countries—Argentina, Australia, Canada, and France—and the Food and Agriculture Organization of the United Nations (FAO) were invited to Washington to discuss the suggestion.

The Administrator of the Foreign Agricultural Service chaired an official-level "Food for Peace" conference in April. This was followed by a conference at the ministerial level in May, with the Secretary of Agriculture presiding.

As a result of these meetings, a Wheat Utilization Committee, with the Administrator of the Foreign Agricultural Service as chairman, was organized to gain closer working relationships among the major wheat-exporting nations in making more effective use of wheat to raise world nutritional levels and to assist world economic development. This work is going forward and tangible results of the committee's efforts are in sight during 1960.

Legislative changes in Public Law 480 to implement the Food for Peace concept were recommended to the Congress.

United States-Russian Exchanges

A broad range of technical information became available to U.S. agriculture in fiscal 1959 through the first Government-sponsored exchange of United States and Russian technical agricultural teams. Under this exchange six groups of U.S. specialists made observation tours of the Soviet Union, while a like number of Russian teams came to the United States.

Agricultural Attachés

Representatives at 54 foreign posts, comprising a unique global agricultural reporting system, enabled U.S. agriculture to keep abreast of changing world situations affecting its welfare. They kept a steady stream of reports, cables, and other communications flowing to Washington regarding foreign agricultural production and supplies, needs of importing countries, competition to be expected from exporting countries, changes in agricultural policies likely to affect U.S. trade, and related matters.

Imports

During the year we continued to give close attention to U.S. agricultural imports, which enable countries such as Brazil and Cuba to earn the dollars they need to buy our agricultural exports. Because of the importance to the domestic economy of such imports as sugar, coffee, tea, spices, and hard fibers, the U.S. trade was kept informed of production and supply outlooks for such commodities.

Foreign Visitors

Contributing to the mutual security program and national policy, our Foreign Agricultural Service helped 3,099 foreign agricultural visitors to obtain special agricultural training and to observe operations in the United States.

AGRICULTURAL STABILIZATION

Extending price support to farmers on their record high 1958 crop production; making sure that adequate storage was available to house the huge crops so that price support could be offered; moving as much as possible of our farm commodity surpluses into useful consumption; and making a start, under new legislation for corn and cotton, toward a more realistic approach to the price-support problems inherent in the continuing high level of U.S. farm production—these were among the major activities of the Commodity Stabilization Service during fiscal year 1959.

Commodity Stabilization Service

More than $4 billion in direct price support was extended to the Nation's farmers during the fiscal year. Most of this financial assist-

ance—approximately $3.5 billion—was in the form of nonrecourse loans made to farmers, with their stored farm commodities which were supported used as security. The remainder was in purchase agreements ($232 million) and in direct purchases ($275 million) of commodities such as dairy products, cottonseed, and cottonseed oil. The total for the year, $4,005 million, was nearly 50 percent more than the $2,684 million extended in the fiscal year ended June 30, 1958. The largest commodity holding was wheat—1,147 million bushels valued at $2,924 million.

Close cooperation among farmers, commercial warehousemen, and the Department made it possible for farmers to house their huge 1958 crops without any serious storage problems. Commercial warehousemen, with the Department's guidance in pinpointing areas of probable storage deficiency, have greatly increased commercial storage capacity over the past few years. The commercial space now available for grains and related commodities is estimated at more than 4 billion bushels. This is nearly twice the capacity available in 1951. Farmers, too, with help from special CCC loans to build new storage or improve their existing facilities, have increased their storage space. As a result of this expansion, the Commodity Credit Corporation again was able to avoid buying any additional storage bins or other facilities for its own use.

During fiscal year 1959, the CCC disposed of price-supported commodities with a cost value of $2,609 million. Of this total, $1,121 million represented sales for dollars; $204 million, barter; $381 million, operations under titles I and II, Public Law 480; $302 million, donations; $413 million, transfers to other Government agencies; and $188 million, payment-in-kind export payments.

These dispositions brought the outmovement of surplus agricultural commodities from CCC stocks over the past 6 years to a total of more than $16.5 billion. Wheat, cotton, corn and other feed grains, and dairy products have accounted for nearly $13 billion of this total. This tremendous operation has helped to hold down the size and cost of the Department's surplus stocks, at the same time making the commodities available for useful consumption both in this country and abroad.

We have increased our emphasis on payment-in-kind export programs. Under these programs, export demand is brought to bear directly on commercial stocks and only secondarily on the CCC inventory, which supplies commodities only in the amount needed to make the in-kind export subsidy payments. This arrangement is of great advantage to both industry and producers, since the bulk of the commodities exported is drawn from commercial or "free" stocks. By thus strengthening commercial market demand for the surplus commodities, the payment-in-kind export programs cut down on the amount of surplus flowing into and out of the CCC inventory under price-support operations. The programs were begun with wheat in

1956 and have since been extended to corn, oats, barley, rye, grain sorghums, rice, and cotton.

During fiscal 1959 a change embodying in part recommendations by the Department was made in the basic price-support legislation for corn. It gave farmers a chance to free themselves from the old unworkable system of acreage allotments for corn, and put them at liberty to make their own decisions on plantings. In a referendum on November 25, 1958, more than 71 percent of the farmers voting approved the change.

This was the first clear-cut, realistic choice farmers have ever had on the question of controls versus freedom of decision. The fact that the majority was so substantial is very gratifying. Farmers are now free to plant as much or as little corn as they wish with the safeguard of a reasonable support level. This is a sensible arrangement.

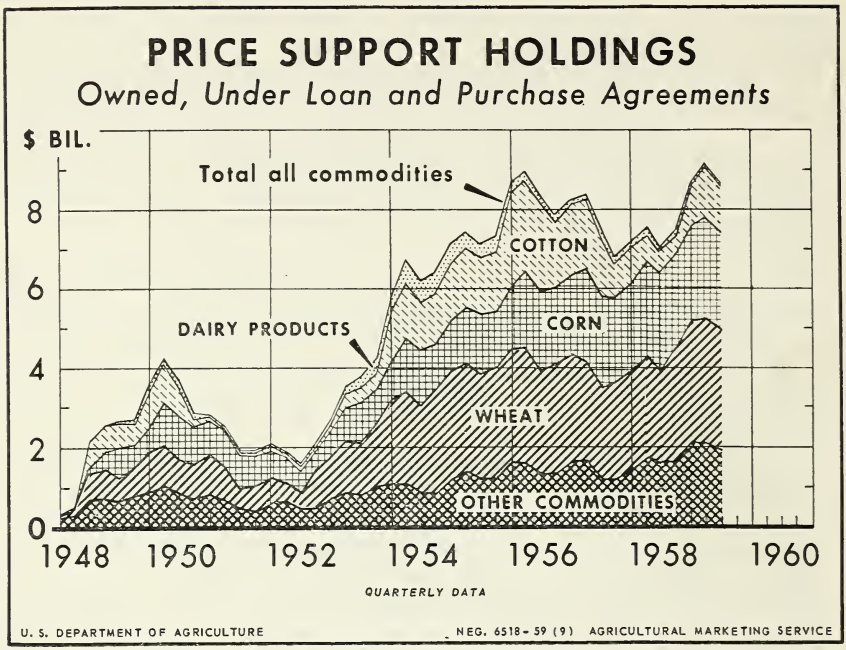
A start also was made during the past year toward a more realistic price-support program for cotton. The new cotton law should help producers and the entire cotton industry. It is designed to provide more freedom to plant, to market, to compete, and to make decisions.

The Agricultural Act of 1958 as it applies to cotton can help this great industry move toward expanded markets at home and abroad. In the first year of operation under the new program about 69,000 cotton farmers elected the Choice B upland cotton program for their farms. This meant that the 1959 allotments for their farms were increased by more than a million acres, from a total of 2.5 million acres to 3.6 million acres. The new legislation by no means provides a complete solution to our cotton problems, but it is a move in the right direction.

By late summer of 1959, the best balance in years between milk production and consumption of dairy products was being achieved. A greater volume of dairy products was flowing into consumer use through commercial channels. Government-support purchases by September 1959, halfway through the April-to-March marketing year, were down 25 percent from the year before. They were the lowest for the period since 1953, when heavy support buying began. Continued extensive movement of CCC-owned supplies into many diverse channels of use had pulled the total dairy price-support inventory to its lowest level in 6 years. The market was again in a position to function virtually free of an overhang of Government stocks.

Sound price-support actions contributed to this improved situation for dairy producers. Milk production has remained at a relatively stable level for the past 2 years, even decreasing slightly, and increased total consumption is eating into the milk surplus.

At the end of June 1959, the Commodity Credit Corporation's total investment in price support totaled $8,649 million. This consisted of $2,449 million in loans outstanding and $6,200 million in inventories



(cost value basis). A year earlier, on June 30, 1958, CCC funds invested in price-support loans and inventories totaled $7,030 million.

Three commodities accounted for the bulk of the June 30, 1959, loan total: Upland cotton, 6.1 million bales, $1,048 million; tobacco, 892 million pounds, $580 million; and corn, 412 million bushels, $514 million. Other commodities on which CCC had loans outstanding were soybeans, wheat, barley, extra-long staple cotton, dry edible beans, flaxseed, grain sorghums, oats, rice, rye, honey, peanuts, tung oil, and gum naval stores.

The largest commodity holdings in the CCC inventory on June 30, 1959, were wheat, 1,147 million bushels, valued at $2,924 million; corn, 1,044 million bushels, $1,861 million; grain sorghums, 281 million hundredweight, $693 million; upland cotton, 1 million bales, $151 million; soybeans, 55 million bushels, $121 million; and barley, 99 million bushels, $116 million. Other farm commodities in the inventory were rice, oats, flaxseed, rosin, nonfat dry milk, butter, cheese, extra-long staple cotton, dry edible beans, rye, honey, tobacco, cottonseed oil, linseed oil, peanuts, and tung oil. Also in the inventory were $70 million worth of strategic materials acquired through barter of surplus farm commodities owned by CCC.

The net realized price-support program loss sustained by CCC totaled $821,127,779 for fiscal 1959, as compared with $1,006,548,967 for fiscal 1958.

The Commodity Credit Corporation is authorized by law to borrow money as needed for operations up to a maximum of $14,500 million

outstanding. As of June 30, 1959, CCC had in use $13,103.5 million of the $14,500 million authorized.

Crop Allotments Quotas: As approved by growers voting in referendums, marketing quotas were in effect for 1959 crops of wheat, cotton, rice, peanuts, and eight principal types of tobacco.

A growers' referendum held July 23, 1959, approved marketing quotas for the 1960 crop of wheat. In referendums held February 24, 1959, growers approved quotas for the 1959, 1960, and 1961 crops of burley and Virginia sun-cured tobaccos, but disapproved them for the 1959 crop of Maryland tobacco and the 1959, 1960, and 1961 crops of cigar-filler (type 41) tobacco. In earlier referendums growers had voted to make quotas effective for the 1959, 1960, and 1961 crops of flue-cured tobacco, and for the 1958, 1959, and 1960 crops of fire-cured and dark air-cured tobaccos.

Sugar Program: Under the Department's sugar program, as authorized by the Sugar Act of 1948, as amended, the wholesale price of refined cane sugar ranged between 9.05 cents and 9.35 cents per pound during fiscal year 1959. Total sugar requirements for the calendar year 1958 were initially established at 8,800,000 short tons, raw value, and finally at 9,200,000 tons. Requirements for calendar year 1959 were initially set at 9,200,000 tons, but by October had been increased to 9,400,000 to meet a tightening supply situation in the Eastern States.

Conditional payments approximating $67 million were made on the 1958 crop to about 64,000 sugar beet and sugar cane producers in 24 States, Hawaii, Puerto Rico, and the Virgin Islands. Sugar tax collections during fiscal year 1959 totaled about $91,375,000.

Federal Crop Insurance Corporation

One of the continuing problems faced by farmers and ranchers is the threat of crop loss or total crop destruction by drought, flood, insects, or other natural disasters. The important role that Federal all-risk crop insurance can play in stabilizing the Nation's agriculture where crop disaster strikes has been demonstrated time and again. Rapid progress has been made in recent years in developing a sound basis for providing all-risk crop insurance to farmers. Building a sounder insurance operation has required changes in the insurance structure (protection and premium rates), policies, and operating methods.

This progress is evident in the experience of the past 3 years. For the first time, the Federal Crop Insurance Corporation had 3 consecutive years in which premiums exceeded indemnities paid. The 1959 loss ratio was 0.72 compared with 0.26 in 1958 and 0.69 in 1957. This is a vastly improved insurance experience compared with earlier years with respect to the relation of premiums collected to indemnities paid.

This strengthening of our all-risk insurance is squarely in line with the changes taking place in the Nation's agriculture. While the more immediate problems of surplus and price have been getting most of the attention on the farm front, virtually every crop disaster of major or minor scope has resulted in requests to the USDA for emergency credit and other assistance. This is the natural result of the fact that farmers with little or no crop to sell and without insurance or other assets to fall back upon are truly in an emergency situation. To them high or low price supports as of that time are of little importance. Their problem is the loss of crop production capital and the need to replenish it so that they can stay in business.

Provisions against possible crop failure seem likely to become more important to successful farming. Along with the technical know-how, good management has become essential. Credit needs and production costs for farming are on the increase. The wrong decision from a management standpoint can break the farmer more quickly than ever. Future farmers may well come to regard insurance of crop production capital against loss from causes beyond the farmer's control as a basic and essential part of good farm management. The present fact is, however, that the percentage of farmers willing to pay the annual premium for such protection is not yet at a high level.

It is our belief that the Federal Crop Insurance Corporation has been developing tomorrow's insurance today. A new guaranteed production plan will go into effect for corn, soybean, and some tobacco counties in 1960 and for other crops in 1961. This simplified plan gives the farmer a choice of several amounts of dollar insurance so that he can fit the insurance to his particular situation.

The plan provides a production guarantee. The "percent of loss" will be the percent the policyholder falls short of his guaranteed production. This "percent of loss" applied to the dollar amount of insurance chosen will determine the size of the indemnity check. The Corporation will no longer be concerned with establishing crop prices. The policyholder himself will decide the dollar amount that his production guarantee shall represent. This new plan may well prove to be one of the most significant improvements in crop insurance since its inception.

Although the 1959 loss experience was favorable, crop insurance cushioned the impact of crop disaster for many farmers and many business communities. From premiums of $18,421,000 about $13,173,000 of indemnities were paid, leaving a premium surplus of $5,248,000. This compares with surpluses of $13,120,000 in 1958 and $5,400,000 in 1957. However, it appeared for a time that indemnities in 1959 would exceed the premiums as the Dakotas, Minnesota, and several smaller areas were threatened with some crop failures of disaster proportions.

The South Dakota loss ratio was 3.13. Minnesota had a loss ratio of 1.07 and North Dakota finally emerged with premiums exceeding

indemnities. About 63 percent of the total 1959 indemnities were paid to farmers in these three States. Ohio, Georgia, and Utah were other States in which losses exceeded premiums. On a crop basis, only flax, barley, oats, peaches, and the combined crop plans required more than their premiums for losses. Dry beans, citrus, corn, cotton, grain sorghum, oranges, soybean, tobacco, and wheat plans had premium surpluses.

SOUND AGRICULTURAL CREDIT

In 1959 the Department continued its excellent record of sound credit service to farmers unable to secure needed loans from private or commercial sources.

Farmers Home Administration

The Farmers Home Administration helped small farmers make better use of their land and resources by advancing credit for the purchase of foundation livestock, equipment, fertilizer, and other operating essentials needed to make farm operations into paying enterprises. Credit was also extended for the purchase of family-type farms, to improve farm housing, farmstead water supply, and other needs.

The following case history is typical in FHA files:

> In 1946 a Navy veteran returned to his father's farm and to his wife and children in Utah's Cache Valley. The young man wanted to get back to farming and eventually to have a topnotch dairy farm of his own.
>
> He worked toward that goal from the start. He and his wife were able to get a little land, a few cows, and farm equipment in the next few years, but it was slow going.
>
> Getting enough credit was one of the major problems. This young farmer did not have sufficient property or collateral to meet the requirements of local lenders for the type and extent of credit he needed to put his plans into action.
>
> After much counseling with dairymen and other farmers, and with the Farmers Home Administration county supervisor and other farm credit sources, the veteran and his wife took a first major step in financing their operations by obtaining a farm development loan from the local Farmers Home Administration office.
>
> Using this credit, they built a modern dairy barn, complete with a bulk milk tank cooler and pipeline milking system, and bought 120 acres of additional land.
>
> The county FHA supervisor helped them work out definite plans for yearly operations as well as longtime goals. They would need more good cows, sound cropping systems, and

adequate pasture, fertilizer, and equipment wisely used.

The dairy farm enterprise grew. Part of the added equipment and livestock was bought with FHA credit. Increased income from milk, sugar beets, and wheat is being used to retire the loans on schedule. Good farm bookkeeping and careful planning are paying off. The farm now has a dairy herd of 48 Holstein cows. Good husbandry and modern, clean equipment have resulted in an average butterfat production of 428 pounds on DHIA testing. A well-planned cropping system on the 190-acre farm provides adequate pasture in addition to alfalfa, corn, wheat, barley, and sugar beets.

This family is well on the way toward obtaining all future credit needs through local lenders. Soon they will fully own one of the best dairy farms in the Cache Valley.

Some highlights of FHA activities in 1959 included:

Insuring of the second largest amount of loan funds advanced by private lenders in 1 year for farm ownership loans.

A continued rise in the average size of operating loans. This reflected borrowers' needs to expand family-type operations and adopt more efficient and capital-requiring farm management practices.

Farm housing loans nearly double those of 1958.

Fewer counties designated for emergency loans than in any year since the program began 10 years ago.

The first loans under the new watershed loan program.

Farmers Home Administration made and insured loans totaling $361,629,000 in fiscal 1959, compared with $330,162,000 the previous year and an average of $329,347,000 per year for the past 5 years.

Principal and interest collections totaled $347,700,000, as against $316,700,000 in fiscal 1958 and a 5-year average of $299,800,000.

Loans outstanding on June 30, 1959, totaled $1,117,397,000 compared with $1,068,000,000 on June 30, 1958, and the 5-year average of $1,007,533,000.

Farm ownership loans totaling $64,733,000 were made to 4,452 farmers to improve and buy family-type farms, enlarge undersized farms to family-type size, and to refinance debts. Private lenders advanced $35,733,000 of this total through the insured loan program, country banks being the primary source of insured loan funds.

Loans to construct and repair farm houses and other essential farm buildings were made to 8,186 farm owners and totaled $60,674,000.

Operating loans to 74,405 farmers totaled $188,500,000, helping them buy machinery, livestock, fertilizer, insecticides, fuel and other farm and home operating items necessary for using land and labor to maximum advantage. The average initial operating loan was $5,481, compared with $4,913 in 1958 and $3,295 in 1954.

Emergency loans amounting to $39,851,000 helped 11,405 farmers, hard hit by conditions disastrous to crops and property, resume nor-

mal operations. Most of these emergency loans were made to farmers who had suffered losses from droughts and floods the previous year and were not yet in a position to obtain all their credit needs through regular channels.

Soil and water conservation loans totaling $7,468,000 were made to 854 farmers and 53 associations. Of this sum, $2,492,000 was insured. These loans helped farmers develop irrigation and farmstead water supply systems and carry out recommended soil conservation practices.

The first three watershed loans were made during the year. They totaled $402,500. This new program enables certain organizations to get credit to help pay for planning and carrying out measures to protect and develop small watershed land and water resources.

There were 99,358 loans of all types made in fiscal 1959, but approximately 196,000 farmers, including those still employing credit received in previous years, made use of FHA credit services. During the year, more than 39,000 borrowers repaid their loans in full.

Many other applicants for loans, after discussing their credit needs and farming plans with county supervisors and working out financial statements, found themselves able to obtain their financing from private or cooperative sources. The Farmers Home Administration extends credit only when it is not available elsewhere.

Rural Electrification Administration

The rural electrification and telephone programs administered by the REA gained in strength and security during the 1959 fiscal year. American agriculture, rural life, and the general economy continued to benefit by the increased use of electric power on the lines of REA electric borrowers and by the expansion and improvement of telephone service by REA telephone borrowers.

Electric Program

Loans from REA made it possible for rural electric systems to connect 131,500 new consumers for initial service. These REA borrowers added 23,000 miles of energized line and other plant facilities and made extensive improvements in existing systems so that their rural consumers could have better electric service.

The estimate of unelectrified farms, made annually as required by the Rural Electrification Act of 1936, indicated that 96 percent of the farms in the United States as enumerated by the 1954 Census of Agriculture were receiving central station electric service on June 30, 1959.

Energy sales by REA borrowers in 1959 totaled more than 23.5 billion kilowatt-hours. This was nearly 14 percent greater than sales in 1958. Farmers continued to use greater amounts of electricity in their farming operations and home life. Farm usage on the lines

of the REA-financed systems averaged 319 kilowatt-hours per month during calendar year 1958. There has been an average increase of more than 10 percent per year in farm usage during the past 11 years. Average monthly consumption by all consumers on these lines was even higher, reaching 393 kilowatt-hours per month. Nonfarm consumers accounted for 54 percent of total power sales in calendar year 1958. It is significant that three out of every four new consumers coming on the lines of REA-financed systems are nonfarm consumers. The retail price of electricity sold consumers by REA borrowers again showed a slight reduction this year to an average of 2.48 cents per kilowatt hour.

Electric heating for houses is gaining consumer acceptance, and rural systems have shown increasing interest in this load. It may soon be an important factor in rural energy sales. Power suppliers are pointing out to consumers that quality workmanship and effective insulation practices are particularly important to satisfactory electric house heating.

During the fiscal year, REA made 250 loans totaling $177,292,100, bringing the cumulative net total of loans to $3,942,338,539, as of June 30, 1959. Of the amount loaned in 1959, 61.7 percent was for distribution facilities, 36.5 percent was for generation and transmission, and 1.8 percent was for consumer equipment.

Three new borrowers received their initial loans from REA during 1959. This brings the number of active electric borrowers to 985 as of June 30, 1959.

The rural electric systems continued to add to their excellent financial record. The total net margin during calendar year 1958 for 954 reporting borrowers was more than $75 million, and 45 reported deficits totaling less than $1 million. As of December 31, 1958, borrowers' net worth totaled more than $515 million, which amounted to 16.6 percent of their total assets.

On their indebtedness to REA, borrowers paid $45 million in interest and just under $100 million as principal during fiscal 1959. As of June 30, 1959, 794 borrowers had payments in advance of due dates totaling more than $146 million in addition to their scheduled payments of principal and interest. Only two borrowers were behind schedule on debt payments of just over $100,000 at the end of the fiscal year. Payments of principal and interest since the program began have amounted to more than $1 billion. Four borrowers paid their remaining indebtedness in 1959. The number of former borrowers having no outstanding indebtedness to the Government on June 30, 1959, was 96.

REA received 249 applications for loans totaling about $231 million in the last fiscal year. At the end of the year, there were applications on hand amounting to $159 million.

An increase in fatalities from electrical shock and other accidents on the systems of REA borrowers prompted acceleration of the REA-

sponsored safety program for rural electric and telephone systems during the fiscal year.

Telephone Program

REA telephone loans made it possible for about 181,000 additional subscribers to enjoy new or improved service during the fiscal year which ended June 30, 1959. Construction was completed on 41,245 route-miles of line, making a total of nearly 183,000 miles of construction completed since the program began. As of the end of the 1959 fiscal year, 532 REA telephone borrowers had placed in service a total of 2,064 modern dial exchanges with REA loan funds.

Data supplied by the Agricultural Marketing Service indicated that about 60 percent of farms in the United States had telephone service of some kind in 1958.

In the 1959 fiscal year, REA approved 223 loans totaling $98,923,000 to telephone companies and cooperatives. Telephone loans from the beginning of the program through June 30, 1959, totaled $575,213,415 to 665 borrowers. There was a net increase of 54 borrowers during the fiscal year.

Operating revenues for 623 borrowers submitting reports for fiscal year 1959 showed a total amount of nearly $65 million.

Telephone borrowers made principal payments totaling $5,268,870 and interest payments amounting to $3,600,407 during fiscal year 1959. Payments in advance of due dates from 95 borrowers totaled just under $1.6 million on June 30, 1959. Thirteen borrowers were behind schedule on debt payments of $309,128.

The receipt of applications for REA loans continued to be heavy. There were 275 loan applications during the year, reaching a figure of more than $122 million. At the end of the fiscal year, REA had on hand 199 applications totaling more than $109 million.

REA continued to provide special assistance to borrowers in meeting communications requirements for military establishments located in rural areas.

Because good telephone service and the security of REA loans are in a large degree dependent upon borrowers utilizing proper operation and maintenance practices, REA intensified its efforts in this field. Properly constructed systems have a direct bearing on the life of telephone plant and the quality of service which the companies and cooperatives can provide. This is important to loan security, and REA has stepped up its cooperation in engineering research and development for materials, equipment, and construction techniques particularly suited to telecommunications in rural areas.

Approximately 8,000 miles of buried plant was approved by REA during fiscal 1959. Borrowers in some parts of the country are turning to buried wire and cable with increasing interest, now that REA cooperation with the telephone industry has made buried plant practical as an alternative to aerial plant.

FACING THE FACTS

In the fall of 1959, the Soviet agricultural newspaper, Sel'skoe Khoziaistvo, published an article entitled, "You Can Be Sure, Mr. Benson, We Will Catch Up and Surpass America." There is no question that the Soviet Union is making a tremendous effort to develop an agriculture equal, if not superior, to ours. On the trade development trip which I made with some members of my staff in September–October 1959, visiting the Soviet Union, Yugoslavia, Germany, Poland, Finland, Sweden, and Norway, we saw posters on every collective farm in the U.S.S.R. urging Russian farmers to overtake the United States. This was particularly true as regards production of milk, butter, and meat.

The Russians are paying us the supreme compliment of imitating our commercial agriculture. They acknowledge us as the world leader.

I feel sure they will not equal or surpass U.S. farm production levels in our lifetime, if ever, under their system of agriculture. They cannot duplicate the efficiency and productive ingenuity which are called forth in a free society and a free economy. I am completely confident of the inevitable triumph of our free American agriculture in this competition—provided we preserve our freedom and resist every attempt to put an economic straitjacket on our agriculture.

In the course of our trip we saw agriculture operating under widely contrasting forms of government—free, part free, and socialized or communized. The people of the United States must never, either through apathy or in a quest for false security, permit our agriculture to slip into the twilight zone of half free, half socialized. Where this has happened in other lands farmers have paid a terrible price, both in lost personal freedom and low standards of living. Consumers have lost, too.

The grim nature of the competition we face from the U.S.S.R. is illustrated by Chairman Khrushchev's words in Pravda: "We do not plan to blow up the capitalistic world with bombs. If we catch up with the United States in per capita production of meat, butter, and milk, we will fire a powerful torpedo under the foundations of capitalism."

The Soviet is trying vigorously to make such a theoretical torpedo, but they still have a big production job ahead. True, the Soviet Union has made, and is making, great strides toward a more efficient agriculture. Yet, according to Soviet sources, some 50 million persons are working in agriculture and forestry—over 40 percent of their total labor force. We have from 7 million to 7½ million persons working in agriculture—about 10 percent of our total labor force. Nevertheless, our total production exceeds theirs by a wide margin. There is a big gap between their productivity and ours—a still wider

gap between their marketing and ours—and a tremendous chasm between their farm standard of living and ours.

One U.S. agricultural worker on the average provides for some 23 persons. In Russia the figure is four or five.

Compared with a typical American farm, life on a Soviet farm is almost primitive. They have about 1 million tractors—owned by the state. We have nearly 5 million—owned by individuals. And, in addition, we have more than a million grain combines, over 750,000 mechanical cornpickers, and more than 600,000 pickup balers.

Few Soviet farms have electricity—compared with 96 percent of ours—and with electricity in the United States have come running water, radios, televisions, refrigerators, deep freezers, vacuum cleaners, and a whole multitude of conveniences that make the typical U.S. farm home as modern as those in the cities.

Many families on Soviet farms live in wooden cabins, even mud huts.

They get to town about as often as farmers in this country used to 60 or 75 years ago.

Our farm families drive modern cars on hard-surface highways. The Soviet farm family rides in horse-drawn carts over roads to match.

We have more telephones on farms in this country than can be found in all of Russia, city and farm combined.

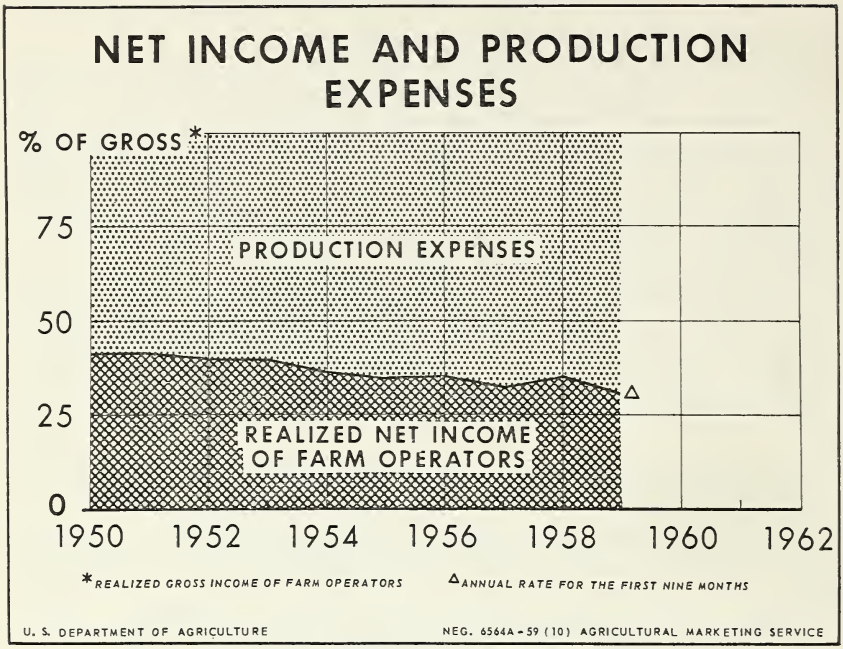
But most important of all, the Russian people do not own the farms they work. In contrast, our farms are not only individually owned, the great majority of them are owner operated and most are free of mortgage.

In short, we are very far out in front.

Actually we have every reason to hope that the current deficiencies in Soviet agriculture will be remedied. If increased agricultural production in the U.S.S.R. is reflected in a corresponding rise in Soviet standards of living, this will be all to the good. Improvement in standards of living is an important prerequisite to permanent world peace.

It might even be that as living standards rise and economic tensions ease, a movement toward a freer agriculture will take root in the Soviet Union and elsewhere. It is up to us here in the United States to convince the world, as we ourselves are convinced, of the innate superiority of our system of privately owned family farms, the profit motive, competitive markets, and freedom for farmers to decide what they want to grow and market.

We have here in America the most wonderful agriculture anywhere on earth. The skill, hard work, initiative, and productive capacity of our farm people merit the warm appreciation of every citizen. There is probably no field of economic activity in which the United States is so clearly a world leader. Never in any nation or civilization have so many been fed so well by such a small proportion of the population.



This does not mean that we have no serious farm problems. We do, and we must not minimize them.

Many farmers have not shared properly in the national prosperity. Agriculture is still caught in the cost-price squeeze. In 18 out of the past 20 years, farmers' costs of production have increased. On the other hand, in 7 of the past 20 years the prices farmers received for their products have gone down.

In 1951, farmers received $20 billion for producing food that cost consumers $46.4 billion. In 1959, farmers received $19.8 billion for producing about 22 percent more food that cost consumers $58.2 billion.

Consumers paid $11.8 billion more, corporation profits before taxes increased about $1 billion, labor costs increased about $5 billion, transportation costs about $1.5 billion—but farmers received $200 million less for producing 22 percent more.

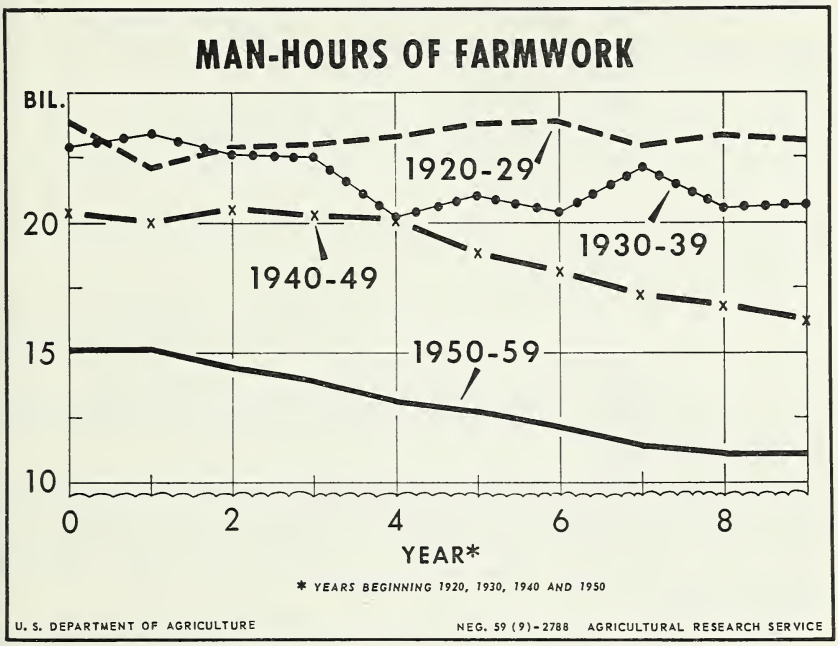
That's one side of the picture.

The other side is that agriculture, and the whole American people, are beginning to face up to the basic problem. We can have every confidence in the judgment of a well-informed public—a public that has the facts. But it is not easy to drive the facts home.

We need to keep firmly in mind such facts as these:

There are two major groups in U.S. agriculture. Roughly 40 percent of U.S. farms produce 90 percent of the farm products marketed. These are the more-productive, well-managed, commercial farms and ranches that in general are doing fairly well.

Roughly 60 percent of agriculture consists of part-time farmers, residential farmers, those on poor soil or in isolated areas, those handicapped by age or illness, families with limited resources. They produce about 10 percent of the products marketed. Underemployment, not surpluses, is their big problem.



Obviously, two very different approaches are required to meet the needs of these two broad divisions in U.S. agriculture. An understanding of this basic fact is essential to any sound solution of the agricultural problem.

The productivity of U.S. farmers is growing more than twice as fast as the productivity of workers in industry. Since 1950, output per man-hour in nonagricultural industry has risen at a rate of 2 percent per year. The increase of output per man-hour in agriculture has averaged 5 percent per year. This fact illustrates the futility of attempting to control total production by the present system of acreage allotments and marketing quotas.

Where farmers have stayed free they have made their biggest and best advances in markets. Four-fifths of agriculture is free.

On the other hand, those commodities that have been least free have been in the worst trouble. Wheat, cotton, corn, rice, peanuts, and tobacco are the crops that have had chronic problems. They are also the crops that have depended the most on supports and controls.

Cotton is an excellent illustration of this point. Thirty years ago farmers harvested cotton on 43 million acres of U.S. farmland. In

1959 we harvested cotton on less than 15 million acres, and still we have a surplus. Our cotton used to hold 60 percent or more of the world market. Now, even with the aid of heavily subsidized export programs, we hold only about 30 percent of the market. In the past 3 years the cost to the taxpayers of programs to keep U.S. cotton competitive in world markets has been about $1.2 billion.

The cost of farm prices and income stabilization programs has risen dangerously high. Over $9 billion of surplus farm commodities are in Government inventory or under loan, with about 85 percent of that huge investment being in wheat, corn, and cotton. The cost of storage, handling, and interest on these stocks is over a billion dollars a year—just the overhead cost of holding the surpluses. By July 1960, the Government will have about $3.3 billion tied up in surplus wheat alone. And the carryover of wheat will be large enough to provide about 450 loaves of bread for every man, woman, and child in the United States.

Less than one-third of U.S. farms account for nearly all of our price support outlays. One-fourth of the cotton farms have three-fourths of the cotton acreage allotments. Two-fifths of the farms with wheat allotments have nine-tenths of the allotted acres. Thus, a relatively few farms account for practically all of the Government price-support outlays.

Some progress has been made toward sounder farm programs, but it has been limited and painfully slow. The agricultural acts of 1954, 1956, and 1958 provided only a fraction of the program we asked for and that farmers need. Our full program has never fully been put into operation.

There are new programs for corn, rice, and cotton—in part the program we recommended. Cotton producers who chose to do so were permitted in 1959 (and will be again in 1960) to exceed their allotments by up to 40 percent, but with price support at 15 parity points lower than if they stayed within their allotments. In 1959 this provision was used by about 69,000 cotton growers who added about 1 million acres to their cotton production.

The corn program, eliminating allotments and placing price support at 90 percent of the average price for the 3 preceding years, but not lower than 65 percent of parity, was approved by 71 percent of the growers voting in a referendum.

Because increased acreage and record high yields resulted in a peak corn crop in 1959, it has been contended that the new program is a failure.

What actually happened is that farmers in 1959 planted more corn and less soybeans, oats, and sorghums. They planted what they wanted to plant.

Consumption of corn and other feed grains in 1959 was considerably higher than in 1958. Disappearance of corn totaled over 3.7 billion

bushels during the 1958–59 feeding season—about the same as the 1958 corn production.

Feeding rates per animal were record high in 1959, 10 percent above the 1953–57 average.

We are consuming more corn at home and exporting more, too. I see no reason why these trends should not continue under realistic, commonsense programs.

The change in legislation for corn is sound. It will get sound results.

We recommended important legislative measures in 1959. The most important recommendation was that the price-support programs for wheat, tobacco, and peanuts be based on actual market prices in recent years.

Recognizing that the Congress might not want to depart from the existing parity standard, we proposed as an alternative that the Secretary of Agriculture be given the same discretion in setting the level of price support for wheat, tobacco, and peanuts as he has for most other commodities.

If price supports for wheat were realistically adjusted to feed-use relationships, acreage allotments and marketing quotas for wheat could be eliminated and the wheat problem at least partly solved.

As regards tobacco, we proposed that the Congress consider the desirability of modifying the present acreage control system perhaps by providing either a poundage quota or a poundage-acreage control system.

With respect to peanuts, we recommended that authorization for a marketing agreement and order program be considered as a supplementary approach.

Nothing was done about these recommendations. On the contrary, the Congress passed a 2-year temporary wheat bill which provided for price support at 90 percent of parity along with reduction of wheat acreage 25 percent below the allotment. The bill was a repetition of proved mistakes in the past. It was like giving the patient another dose of what made him ill in the first place. When this bill was wisely vetoed, no further price-support action was forthcoming.

Other legislative recommendations included the extension for 1 year of the Agriculture Trade Development and Assistance Act of 1954 and an expansion of its authorized funds—

Extension of the conservation reserve allotment beyond 1960—

Legislation to broaden the sources of capital from which the Rural Electrification Administration system may obtain funds to finance needed expansion—

Placing on a revolving fund basis most of the operations of the Farmers Home Administration not already on that basis—

Extension of the Sugar Act to permit advance planning by the growers and the industry—

State participation in drought relief and other natural disaster programs equal to 50 percent of the programs.

Of all these recommendations, only one received favorable action. The Agricultural Trade Development and Assistance Act (Public Law 480) was extended for 2 years and its authorization for expenditures was expanded.

Obviously, it is highly important that the needed farm programs be provided without delay. Even if appropriate price-support legislation were enacted early in 1960, it could not take effect on the most critical crop, wheat, until 1961 at the earliest.

The farm problem is not hopelessly complicated. It can be solved. We must give greater production freedom back to farmers. We must loosen the Government's stranglehold on agriculture.

We must have farm programs which will preserve freedom. We need programs that will help promote a prosperous, expanding, and free agriculture in a prosperous, expanding, and free America—an America, under God, that is socially, economically, and spiritually sound.

No one knows what the future will bring. But there are many indications that a tremendous future lies ahead. Ten years from now, it is estimated, there will be—

33 million more Americans—210 million in all.
14 million more workers, 13 million more students in school.
90 million cars and trucks on the roads.
Total spending in United States will be approaching $700 billion a year.
At least 25 percent more food will be consumed.

That is agriculture's coming market. These are the changes that lie ahead. This is our future. There is no other land on the face of the earth such as this one. We have so much for which to be eternally grateful. No nation under heaven has been more richly blessed. Our scholastic, social, religious, business, and agricultural opportunities are without parallel.

Let us be sure we make the most of them.

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